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INVESTIGATION OF THE NATIONAL DEFENSE PROGRAM

U.S. Congress
HEARINGS

BEFORE A

SPECIAL COMMITTEE INVESTIGATING THE
NATIONAL DEFENSE PROGRAM

UNITED STATES SENATE

SEVENTY-SEVENTH CONGRESS

FIRST SESSION

PURSUANT TO

S. Res. 71

A RESOLUTION AUTHORIZING AND DIRECTING
AN INVESTIGATION OF THE NATIONAL
DEFENSE PROGRAM

PART 5

JUNE 3, 4, 5, 10 AND 12, AND JULY 9, 1941

FUNCTIONS OF THE O. P. M.

EMERGENCY SHIPBUILDING PROGRAM

Printed for the use of the Special Committee Investigating
the National Defense Program



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INVESTIGATION OF NATIONAL DEFENSE PROGRAM

TUESDAY, JUNE 3, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING THE
NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:30 a. m., pursuant to adjournment on Wednesday, May 28, 1941, in the Interstate Commerce Committee room of the Capitol, Senator Harry S. Truman, chairman, presiding.

Present: Senators Harry S. Truman, chairman; Mon C. Wallgren, James M. Mead.

Present also: Hugh A. Fulton, chief counsel; Charles P. Clark, associate chief counsel.

The CHAIRMAN. The committee will come to order.

Mr. Dempsey, will you be sworn, please?

Do you solemnly swear to tell the truth, the whole truth and nothing but the truth, so help you God?

Mr. DEMPSEY. I do.

TESTIMONY OF JOHN J. DEMPSEY, COMMISSIONER, UNITED STATES MARITIME COMMISSION

The CHAIRMAN. Give the reporter your name and connection.

Commissioner DEMPSEY. John J. Dempsey, member of United States Maritime Commission.

The CHAIRMAN. You had a statement you wanted to make before this committee, I think, Mr. Dempsey.

Commissioner DEMPSEY. Yes, Mr. Chairman, with your permission I would like to offer as an exhibit a more detailed statement which I will brief for the committee, if that is agreeable to you.

The CHAIRMAN. Fine, that is perfectly agreeable.

(The prepared statement referred to was marked "Exhibit No. 66" and is included in the appendix on p. 1465.)

Commissioner DEMPSEY. I want to say first, Mr. Chairman, I think the formation of your committee with authority to look into the various phases of what the different agencies of the Government are doing is a very splendid thing. The more familiar Members of Congress are with what we do and the more suggestions we receive from you, in my opinion, the better off we both will be.

The CHAIRMAN. Thank you for that.

Commissioner DEMPSEY. Insofar as the Maritime Commission is concerned, if I say anything in praise of it, I do so realizing that I have in no way contributed to its splendid accomplishments because

I have been with the Commission a very short length of time. It has been my observation since I have been there that it has done an excellent job. Insofar as speed is concerned, I think that the record will show a speed that has not been before equaled in the construction of ships in our country. A large measure of this success and progress is attributable to our able chairman, Admiral Land, who, in my opinion, more than anyone, is responsible for the enviable position the American shipping and shipbuilding industries occupy today.

FUNCTIONS OF MARITIME COMMISSION IN NEW SHIP CONSTRUCTION

Commissioner DEMPSEY. The act which created the present Commission was passed in 1936. It set up a permanent Commission of five members, the thought being, and the desire, to build up as rapidly as possible, consistent with reasonable expenditures, an American Merchant Marine. At the time this act was passed, there were very few American ships operating on the seas. The first authorization was for a long-term program to cover 500 ships, building about 50 a year, and I may say that in the past 2 years the 50 per year has been accelerated. We have already contracted for 198 ships under that long-range program. We have delivered 85 of those ships to date.

The CHAIRMAN. Eighty-five of one hundred and ninety-eight?

Commissioner DEMPSEY. The total authorization and contracts let for the original long-term program was for 198 ships. Of that number, we have delivered 85. There have been launched about 111, and the keels have been laid on probably 35 additional.

Those ships were all contracted for as a result of competitive bids. Recently the Congress authorized us to construct 200 emergency ships which we have designated as the Liberty fleet. The latter group of ships is not being constructed pursuant to competitive bidding, and I think the committee will readily understand why, inasmuch as the cost of labor and materials was going to such heights that to place them on a competitive bid basis, would mean that the contractor would, as a matter of protection, bid very high, and the cost of the ships would be greater than if we constructed them on a cost-plus-a-fixed-fee basis.

We have changed from former plans or the former method of constructing the ships. We are not constructing them on an actual cost-plus-a-given-percent-of-cost basis, but we are constructing on the basis of actual cost plus a fixed, definite fee. This fee can be increased or decreased, depending upon the progress or lack of progress of the construction of the ship. For instance, if a ship is estimated to cost \$2,000,000, there is a certain number of labor hours that go into the construction of that ship. If the contractor effects a saving, he is given a portion of the saving, 50 percent of it. If he is given 280 days to construct the ship and he delivers it earlier than that, for each day he gets a bonus, and for each day it is delayed he is penalized. In no case for the construction of one of these Liberty fleet ships can the contractor receive more than \$140,000, nor can he receive less than \$60,000. That is quite a material saving.

The CHAIRMAN. What is the tonnage of these ships?

Commissioner DEMPSEY. About 10,000 tons.

The CHAIRMAN. And you are pursuing a policy of giving a fellow a part of the saving that he makes for the Government?

Commissioner DEMPSEY. Yes, sir.

The CHAIRMAN. I wish the Army had thought of that.

Commissioner DEMPSEY. I think it is a better arrangement than that which the Army or Navy is pursuing.

The CHAIRMAN. There isn't any question about that, and if you had seen what I have seen with these camps you would understand very well why I am making that statement.

Commissioner DEMPSEY. We have not only let contracts for the 200 ships for the construction of which you authorized \$350,000,000, but shortly thereafter, the President authorized us, after receiving authority from Congress and the money to do the job, to construct 212 additional ships. One hundred and twelve of those are of the Liberty fleet type. One hundred are our standard ships which we refer to as the "C" types, including 72 tankers. The tankers will be of about 16,000 tons.

We have delivered, have under construction, or have allocated construction contracts up to this date for a total of approximately 700 ships. Commencing late in November, we will be getting delivered to us about a ship a day. I want to point out to you in that connection that from the years 1926 to 1936, there were only 9 cargo ships of a capacity of 2,000 tons or more constructed in American shipyards. But we will now shortly reach a point where we will be turning out complete one ship a day. The entire program as authorized will be completed in 2 years, on about the 17th of March, 1943.

In connection with the emergency we have found it necessary to set up in the Commission a Division of Emergency Shipping. We have selected to run the Division some of the outstanding ship operators of the United States. They are working for the Commission on a very small fee basis, some of them for a dollar a year. This year the requirement so far in strategic materials requires that approximately 21,000,000 tons be brought from foreign shores to the United States. In 1938 we had but 16,000,000 tons brought in, and of that tonnage, 66 percent was brought in on foreign-flag ships. Those foreign-flag ships have now disappeared and we find it necessary to bring in not only the 16,000,000 tons that we brought in during 1938, or its equivalent, but 5,000,000 tons in addition. Hence we organized this Division of Emergency Shipping in order to receive the greatest efficiency out of the total tonnage obtainable, and I want to say in this connection that with very, very few exceptions, the shipowners and operators have shown an amazing spirit of co-operation. We have taken ships from one berth and put them in another and there has been very little complaint. As a matter of fact, they say, "We have so many ships; where do you want them?" and that is the basis we are going on.

The CHAIRMAN. Is your construction affected by these labor troubles that this committee has been going into?¹

Commissioner DEMPSEY. Yes; on the west coast. We have had very little labor trouble until this west coast situation.

The CHAIRMAN. How many vessels are involved in this difficulty in San Francisco Bay?

¹ See Hearings, Part 4, for investigation of West Coast Shipbuilding strike.

Commissioner DEMPSEY. Senator, I will get you that for the record. I don't have the number.¹

The CHAIRMAN. I will appreciate it if you will. And how much this delay is affecting the delivery of these ships—I would like to know that, too.

Commissioner DEMPSEY. Yes, sir. The Moore Co. out there have a contract with the Commission and they, of course, have been held back, as have the others, by reason of this strike. I understand that the men are going back to work in rather large numbers with the exception of the machinists—the men who created the situation.

We have recently asked the Congress, and as a matter of fact the House has passed a bill, H. R. 4700, to aid in the importation of strategic materials. This bill permits the Maritime Commission to give to the operator of each ship a warrant which gives him preference in docking, lighterage, fueling, and repairs of his vessel, provided he will comply with the request of the Commission to bring in a certain number of tons of strategic material from the various ports on his route. As I say, there have been only a few who have refused to cooperate in our program, but those two or three might upset the whole program.

The desire of one or two of the operators is, of course, to make as much money as possible, and ore doesn't happen to be the highest priced cargo. For instance, you get \$18 a ton on ore, where on cocoa you would get \$40, but we don't need cocoa as badly as we need ore at this time, and we don't feel it is fair that one man should put on the high-priced cargo and those who are patriotic and wish to help out in this national-defense program should get a lower price. But we are arranging it so that irrespective of what strategic material they bring in, their profit will be a reasonable one. We don't wish to have anybody operate at a loss because he is serving the Government, nor do we wish to have him make too much money because he is serving the Government.

In general, the Commission's functions involving the administration of the regulatory sections of the various shipping acts such as formal proceedings, conferences and pooling agreements, and rates, charges, and practices of water carriers engaged in foreign trade, are under the able supervision of Commissioner Woodward.

Mr. Chairman, in addition to the construction program, it is readily seen that with all the ships we are constructing, you will require a great many more men than you have formerly used to man them. About 2 years ago, or perhaps a little more than that, we set up training schools to train men as able-bodied seamen, to train others to be officers, etc. So far there have been about 14,000 men attend these schools. It is going to be necessary to increase our training facilities because we will require a tremendous number of additional men to man all these additional ships we will have. But we are preparing for this requirement, and in fact have our plans well along.

In addition to that, the need for men in the shipyards requires that there be a great many more trained, and with our facility contracts

¹ Commissioner Dempsey subsequently informed the committee that as a result of the strike of the International Association of Machinists, Local No. 68, in the San Francisco Bay area, work was delayed on a total of 11 Maritime Commission vessels. Of this number, 5 were at fitting-out piers and 6 were on the ways.

we are setting up at the various shipyards schools for training—training men in welding, and in various other occupations.

The CHAIRMAN. Have you had any trouble with the labor on these ships?

Commissioner DEMPSEY. Very little. We get reports occasionally of some man aboard a ship, a member of the crew, beating up somebody, and the man who is beaten up usually claims he was beaten up because he has attended one of our schools; but I think taking into account the total number of men employed in maritime work, we have had very, very little trouble.

The Government, in connection with the building of emergency ships, found it necessary to build additional facilities because there was a great shortage of such facilities at the time that we entered upon the program. The sites were carefully located for the additional facilities in order not to interfere with the Navy's work, and so that, through cooperation they would not construct where we were building and thus interfere with our work.

The facilities are nearing completion. Immediately upon getting the authorization from the Congress to go ahead, we stepped in, obtained the locations and the contractors moved in, and in many instances started to work even before the title was cleared on the land.

The CHAIRMAN. Are you building any of these ships on the Great Lakes?

Commissioner DEMPSEY. No. We are now looking into the possibility of the construction of ships on the Great Lakes and, should it be found feasible, it will be necessary, because of clearance difficulties, to construct nothing above deck. We would probably have to tow any such ships down to New Orleans and complete the construction there.

The CHAIRMAN. You can tow them down through the Illinois River and the Mississippi to New Orleans?

Commissioner DEMPSEY. That is right.

The CHAIRMAN. I am glad to hear that. Maybe we will make an inland waterway out of the Mississippi yet.

Commissioner DEMPSEY. I don't think there is any question about it being feasible. Our technical men consider that it is.

You gentlemen probably have heard discussions about war-risk insurance. I saw such an article in the Congressional Record just the other day. The Commission has not felt up to this time that war-risk insurance was necessary to the point that we have required any of it, because our ships are not going into the combat zones. One or two operators have taken our war-risk insurance where they have long voyages, but we have not thrown open our insurance fund generally. We, of the Commission, feel that as long as we can get cooperation, the best people to operate ships are the men who have been operating ships and we will not take over operations. We feel, too, that the best way to handle insurance is through the regular channels, provided the rates do not become exorbitant. Should that occur, however, we will step in.

There has been some suggestion that because of some of this insurance going to the London market, there is a leak as to where our ships are going and what cargo they are carrying. That is simply silly. Each seaman, when he signs up, knows exactly where that ship is going and he knows what cargo is on the ship, and he may

know that several days before the ship sails. We are operating commercial cargo ships and our men are not in the Navy; we cannot send them on a voyage unless they know where they are going, so there isn't anything to this question of insurance tipping off anybody that might be considered an enemy. That just doesn't exist. The information gets out because every man on the ship knows where the ship is going.

The CHAIRMAN. And everybody else in the world probably knows as soon as we do on any other ship that starts out.

Commissioner DEMPSEY. I am sure of that.

Mr. Chairman, that is the general picture of our program, and I do want to say that I have been engaged in various kinds of business throughout my life, but I have never been associated with a more efficient organization than the United States Maritime Commission; and again I say that because I have been with them just a short time and to me comes none of the credit.

The CHAIRMAN. How many contractors are you doing business with on this construction program?

Commissioner DEMPSEY. Not very many. I am glad you asked about that. We had difficulty in getting the program started because shipbuilding in the United States had reached a low ebb. There were only a few yards operating. As I said before, from 1926 to 1936 only nine cargo ships were constructed in the United States of 2,000 tons or more. Faced with this situation we approached those who were in the shipbuilding world, those who had the shipbuilding brains, and requested that they take some of their key men out of operating yards and put them in our new yards to supervise the building of these ships. I would say that in the emergency program there would not be more than eight or nine ship-construction organizations.

The CHAIRMAN. You have only about eight or nine contractors building ships for the Maritime Commission?

Commissioner DEMPSEY. Yes, sir.

The CHAIRMAN. Are they pretty well scattered? Are they on both coasts?

Commissioner DEMPSEY. Yes, sir. We have yards, for instance, at Portland, Oreg.; Los Angeles; Houston; Baltimore; Mobile is doing additional shipbuilding; Wilmington, N. C.; Seattle. They are very well distributed and the entire country is getting a look-in on this work.

There has been some little dissatisfaction in New England because we are not doing more, but the survey of labor will indicate that if we moved in there, we would be competing with labor that the Navy now is using, and the Navy's program is extremely important.

The CHAIRMAN. You try to distribute these new yards so that you would not compete with the Navy in their construction program?

Commissioner DEMPSEY. Yes, sir; and the selection of the yards was all cleared through O. P. M. and there has been no disagreement in any of the Government agencies as to the proper location.

Senator WALLGREN. You mentioned awhile ago the number of ships that were under construction at the present time, a certain type of freighter. Do you know what that is costing the Government to build those ships?

Commissioner DEMPSEY. You mean the Liberty fleet type, the new ship?

Senator WALLGREN. Yes; that is the regular freighter, the "C" type you speak of.

Commissioner DEMPSEY. They run about \$2,300,000 each.

Senator WALLGREN. What is the tonnage of those?

Commissioner DEMPSEY. They average about 10,000 tons.

Senator WALLGREN. Is that about the average cost of them over the period of this program?

Commissioner DEMPSEY. No; it is higher than the average.

Senator WALLGREN. I thought it was.

Commissioner DEMPSEY. The cost of materials has gone up, as well as the cost of labor.

Senator WALLGREN. You begin to appreciate this when you realize that ships were being sold here 2 or 3 years ago that were 20 years old, for somewhere around \$10 a ton, weren't they?

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. And today they are up to somewhere around \$70 or \$80 a ton for a 20-year-old ship. But these are newly constructed ships and right up to the minute, and they are able to travel at about 15 knots.

Commissioner DEMPSEY. Our "C" type ships go as high as 19. They are very fast, and very efficient ships.

Senator WALLGREN. I have looked into this matter a little, partly because of my service on the Merchant Marine Committee in the House. I think that the Government is getting more for their dollar in this ship-building program than anything else we are doing today.

Commissioner DEMPSEY. Thank you, Senator, I am glad to hear you say that.

Senator WALLGREN. I think they are. I know that is a lot of money to spend for that kind of ship, but I know that you could turn around and sell it in the open market for pretty close to that figure.

Commissioner DEMPSEY. We had, as you pointed out, about 200 ships in what was termed a laid-up fleet, and about 60 or 70 of those were sold off for scrap value, about the value you put on them, some few years ago. We retained about 112 of them, of which some 50 or 60 were sold to the British. The balance have all been reconditioned and the last of them are going into operation now. Those ships are very efficient; and I think again the Commission at a time when I was not a member of it, showed rare judgment in retaining the number of ships it did.

Senator WALLGREN. When we first started the program, we figured the average life of one of these ships about 20 years, is that right?

Commissioner DEMPSEY. That is right.

Senator WALLGREN. We had I don't remember how much tonnage of 20 years of age, and the idea was to build new ships to replace these and we were to permit these ship concerns to turn in these ships, just to scrap them, to junk them. You find now today that some of those ships that we talked about turning in that were 20 years old—well, they were getting prices up to \$800,000 for these ships.

Commissioner DEMPSEY. They are doing great service.

Senator WALLGREN. And I guess the prices went close to \$70 or \$80 a ton on old ships that are not able to do more than 10 knots.

Commissioner DEMPSEY. They are slow.

Senator WALLGREN. While these ships that are being built today are just the last word in ship construction, I am wondering whether or not the Commission has had any propositions put before them by people who are willing to build ships out of wood.

Commissioner DEMPSEY. Senator, the Commission has had propositions from people who want to build ships out of wood, concrete, and every other conceivable type of material.

Senator WALLGREN. There seem to have been considerable improvements in the method of constructing wooden ships. I have heard a lot about it because of my interest in timber in my section of the country.

Commissioner DEMPSEY. I well realize your interest and we appreciate your showing that interest with a number of people.

Senator WALLGREN. I think these people really have something, and I know that they intend to place their proposition before the Commission, and I hope that you will give them every consideration because, Lord knows, we have enough trouble with steel construction today.

Commissioner DEMPSEY. I can assure you the Commission will give every consideration to any type it believes can be used.

There is one thing I overlooked pointing out to you. The Congress authorized the Maritime Commission to subsidize the construction of American ships to the amount of the difference between the cost of a foreign-constructed ship and an American-constructed ship. They also authorized the Maritime Commission, where competition existed, to subsidize the operation of those ships, the Federal Government paying the difference between the cost of foreign labor on board ship and American labor.

During the past several months, the competition has largely disappeared. The Maritime Commission now finds itself in the position where it is necessary to serve notice on the operators that unless they can show legitimate competition, the operator's subsidy, which amounts to millions of dollars a year, must cease.

The CHAIRMAN. That is, the profits have become great enough so it is not necessary to furnish them with a subsidy?

Commissioner DEMPSEY. Yes, sir. The operating profits are very high at this time. All rates have gone up.

Senator WALLGREN. It is very hard to figure comparative costs now.

Commissioner DEMPSEY. If there is no competition, Senator, there wouldn't be any comparative figure. The competition has disappeared. Our ships are operating without competition. They have increased their rates on freight as much as 500 percent on some commodities.

Senator WALLGREN. More than that.

Commissioner DEMPSEY. Yes; so there is no justification for a subsidy. We anticipate some of the operators will take rather unkindly to this situation, and I assume that many calls will be made upon you gentlemen in the Congress asking you to intervene in connection with it. But if that happens, I do wish you would ask for the financial statement of the line that asks you and look into its subsidy, and its competition, and you will certainly be amazed at the earnings.

Senator WALLGREN. How many lines are being operated today by the Maritime Commission?

Commissioner DEMPSEY. We are not operating any lines.

Senator WALLGREN. How about the American President Lines out of San Francisco?

Commissioner DEMPSEY. We are not operating it. It is a corporation. We do own about 90 percent of the common stock.

Senator WALLGREN. I mean the Maritime Commission owns 90 percent of the common stock.

Commissioner DEMPSEY. That is right.

Senator WALLGREN. You have the Seattle-Orient Line; is that on about the same basis?

Commissioner DEMPSEY. We don't control it at all.

Senator WALLGREN. The Maritime Commission are sort of financing that program?

Commissioner DEMPSEY. It would finance the program as far as the construction of ships is concerned.

Senator WALLGREN. Have you any lines operating similarly to the President Lines?

Commissioner DEMPSEY. No, sir.

Senator WALLGREN. That is the only one?

Commissioner DEMPSEY. Yes, sir. And I think that the Commission would feel very much relieved if we could dispose of that stock at a proper figure and get out of it.

Senator WALLGREN. I understand that was the idea in the first place, to establish the trade route, establish the line, and if private industry could come along and pick up the line later, the Commission was willing to let it go.

Commissioner DEMPSEY. That is right.

Senator WALLGREN. I am glad to hear that is the only line in this country operated that way.

Commissioner DEMPSEY. It is the only one.

The CHAIRMAN. How are your shipyard facilities financed?

Commissioner DEMPSEY. Our shipyard facilities are financed directly through the Federal Treasury. We own the facilities.

The CHAIRMAN. And when you get through they will belong to the Government?

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. You mean where all ships are constructed for the Maritime Commission?

Commissioner DEMPSEY. All these new facilities.

Senator WALLGREN. For instance, I attended a launching up at Chester, Pa. That is the Sun Shipbuilding Co.

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. That isn't owned by the Maritime Commission.

Commissioner DEMPSEY. Part of it will be. That was the only place and the only instance where the Maritime Commission found it necessary to invoke the power of condemnation, at Chester, Pa., on what was known as the Eddystone property. It adjoins the Sun Shipbuilding Co. We wanted them to put in 8 additional ways that we would own, so that we not only own the facilities but we own the land. We have taken it over by condemnation, and we are extending it: there will be a total of about 12 ways, and that is where the 72 tankers are

being constructed. We own all the buildings on the property and we will have a separate yard. It is connected with the Sun, but it is a distinct and separate proposition.

Senator WALLGREN. One other question on the matter of constructing tankers. Private concerns, let's say like the Standard Oil Co. and these other concerns, have their tankers; but over a period of years we have employed a tanker that couldn't make any speed at all. Now, as I recall it, I suggested an amendment several years ago to the ship subsidy bill¹ that we provide a subsidy for these private concerns that would take care of the cost of building a speedier tanker as against the low-speed tankers they were using. The amendment was turned down at the time, but I think it was later added to the ship subsidy bill, or by regulation you worked it out in some manner, so that sort of subsidy is being granted today, isn't it, that is, to a private concern to take care of the difference in cost between a high-speed tanker and a low-speed tanker?

Commissioner DEMPSEY. Senator, that might well be, but frankly, I don't know that that exists.

Senator WALLGREN. All I was trying to get at was just what that cost was amounting to as far as expenditure is concerned.

The CHAIRMAN. You can furnish that.

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. The idea was that we had these tankers and they weren't able to keep up with our Navy, and there was no interest as far as the private companies were concerned, as far as constructing a fast tanker, if we were going to have a tanker that would be able to keep up with our Navy, why we would have to put in a higher-speed engine, Diesel motors, and so on; that would cost more money.

Commissioner DEMPSEY. Mr. Weber² points out to me that the Commission did assist Standard Oil in building 12 speedy tankers; they have since been purchased and turned over to the Navy.

Senator WALLGREN. I see. I was just wondering at the time that they were built what the subsidy amounted to, as to what the difference in cost was between a high-speed tanker and a low-speed tanker.

Commissioner DEMPSEY. I will be glad to get that for you.³

Senator WALLGREN. You have the practical experience there of doing the job, and I was just wondering what that cost them to do it.

The CHAIRMAN. Senator Mead, did you have any questions?

¹ Pub. 705, 75th Cong.

² William A. Weber, Assistant to Commissioner Dempsey.

³ Commissioner Dempsey subsequently informed the committee that:

"Pursuant to the provisions of the Merchant Marine Act, 1936, as amended, the Commission paid for the incorporation of higher-powered machinery, gun foundations, magazine spaces, and other national-defense features, as requested by the Secretary of the Navy, for 12 high-speed tankers which were constructed by Standard Oil Co. of New Jersey. The cost of these national-defense features was \$880,250 for each of the 12 vessels. In this way, 12 tankers were built with a sustained sea speed of 16½ knots, instead of 13 knots as was originally contemplated by Standard Oil. No operating subsidy was provided for these tankers. They have all since been acquired by the Maritime Commission under the terms of the original agreements between the Commission and the Standard Oil Co. under which the national-defense features were built into the vessels, and delivered to the Navy. Standard Oil Co. will be paid, pursuant to the terms of the original agreement, the price at which the company, on the date of acquisition by the Navy, could contract for the construction of a vessel of similar capacity but without the national-defense features, less a deduction from such contract price in an amount equal to the depreciation of the tank ship acquired by the Commission. The Navy Department is to reimburse the Maritime Commission in an amount equal to that paid Standard Oil by the Commission by reason of the acquisition of the vessel, plus the depreciated cost of the national-defense features."

Senator MEAD. Commissioner, you spoke a moment ago about the necessary continuation of a subsidy for some lines whose profits were such that the subsidy was no longer warranted, and you mentioned the fact that some of these shipowners might be contacting Members of the Congress. Have you powers now inherent in the Commission to determine whether or not subsidies are warranted?

Commissioner DEMPSEY. Not so much whether they are warranted except by competition. If there is no competition, then the Commission has full power to stop the subsidy.

Senator MEAD. In other words, it isn't required by the Commission that they be given any further legislation in order to handle this subsidy?

Commissioner DEMPSEY. Not at all.

Senator MEAD. It is in your hands?

Commissioner DEMPSEY. That's right, and we have already put the operators on notice. Several of them have consented. Others are protesting a little, and we are going to ask them to come in and make a case unless they agree.

Senator MEAD. You are considering that matter right now?

Commissioner DEMPSEY. Oh, yes, sir.

Senator MEAD. Another thing, Commissioner, that would be of interest to the committee, I believe, would be some comparison as to the productivity of ships under the present Maritime Commission as compared with the high productivity during the peak period of productivity in the World War period. Have you any comparative figures as to their volume of production as compared with your present volume?

Commissioner DEMPSEY. Yes; I can give you that, and I can also state definitely that insofar as I recall, there wasn't one of those ships ever sailed with cargoes that—

Senator MEAD. You mean there wasn't a cargo ship constructed—

Commissioner DEMPSEY (interposing). And finished.

Senator WALLGREN. They weren't finished in time to be of any use.

Commissioner DEMPSEY. That's right.

Senator WALLGREN. But we are finishing them today and they are already in use?

Commissioner DEMPSEY. We are getting about a ship and a half a week.

Senator WALLGREN. But this comes about because of the farsightedness of the administration in going after this merchant marine program and starting to build these ships long before this war started.

Commissioner DEMPSEY. I am perfectly amazed at how farsighted this administration was in putting this program into effect, because had it not been done, well, it would have been a serious situation here today. I don't know where we'd have been.

The CHAIRMAN. We would have been in the same situation as we would have been, probably, only worse, had we not built Bonneville and Grand Coulee and the T. V. A. for aluminum, and still we can't get enough aluminum.

Senator WALLGREN. If you go back to the hearings before the Merchant Marine Committee of the House, in 1934 and 1935, you will see where we talked about this program on the basis of national defense.

Commissioner DEMPSEY. It's amazing.

Senator MEAD. Yes; I recall the attempt of this administration to recapture the supremacy of the seas which we now have for the third time in our history. But what I am getting at is not the question as to whether or not these ships were utilized during the war, which was of short duration after we got into it, and we must consider the fact that we had no Maritime Commission set up before that war took place. But I am concerned about the peak productivity that they reached at any one given point as compared with the peak productivity you have reached so far.

Commissioner DEMPSEY. Yes, sir. I can give you that in detail, and I stated to the members of the committee, before you arrived, late this year we will be delivering a ship a day of approximately 10,000 tons capacity.

Senator MEAD. A ship a day?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Of 10,000 tons capacity.

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Now I understand there are a number of shipyards that were used in the first World War period, and some of them have been used since that time, that are not now used.

Commissioner DEMPSEY. That's right.

Senator MEAD. By your Commission?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Although the facilities are there, the equipment is there, the personnel is there, and it just does not fit into your Nation-wide scheme of things. Is that helpful especially when there are shut-downs in some sections of the country?

Commissioner DEMPSEY. Senator, when this program was laid out, we first had a labor survey, and the ship labor in many instances was not where it had formerly existed, because there had been no ships built over a period of many years. The labor went from the shipbuilding industry to other industries, and it just wasn't there. In certain marine States we had complaints that there were a certain number of unemployed, but when we broke them down into various occupations, they just didn't exist. One of the cases was in Connecticut; we checked into it very carefully. There is a shipyard there that has not been used, but Electric Boat Co. is there now with a tremendously big job for the Navy, and it was the belief of the Navy and others in high authority that for us to go in there would simply take the employees needed to build Navy ships and would not help the program.

Senator MEAD. I understand in addition to some idle shipyards in New England, as you have just mentioned, that we have an idle shipyard in Albany, N. Y. That's under the direction of the Albany Port Authority, an official agency created by State law, and they have, like the Port of New York Authority, complete jurisdiction over the activities of the entire port of Albany. They have just completed, under their direction and by contract with the Cargill Co. a 12,000-ton tanker, and now their facilities are not being used. Their employees are to be laid off, and it occurs to me that this going concern with the administrative, financial supervision, and personnel should be utilized either for the manufacture of ships for this country or for the British account, and I understand that they are

having difficulty, as a result of the attitude of the Maritime Commission, in even securing consideration from the British commission.

Commissioner DEMPSEY. Well, I would be happy to get you the answer to that. I'm frankly not familiar with the Albany situation.

Senator MEAD. The representative of O. P. M. who was before the committee¹ doubted that such a possibility could exist.

Commissioner DEMPSEY. The British—

Senator MEAD (interposing). And I have since furnished him the information—

The CHAIRMAN (interposing). He did very frankly doubt that such a situation existed.

Senator MEAD. Yes; and I gave him the information concerning the construction and the launching of this vessel, and the fact that when that was launched they had not further business.

Commissioner DEMPSEY. I would be inclined to doubt it, but when the Senator from New York tells me, and I am quite familiar with how thoroughly he understands the situation in his State, I would think there were grounds for looking into the situation.

Senator MEAD. It was brought to my attention originally by Representative Byrne from Albany, and since then I have received communications from the Albany Port Authority, and I have sent those communications to Mr. Cooke of O. P. M., who was a witness before our committee, and who was amazed to learn that the facilities were not to be used even though they were there and had just completed a big ship, and he told me that he would take it up with your Commission, so that it will come to your attention, and I wish you would look into it.

Commissioner DEMPSEY. I will be very glad to. I want to say this, that as far as the British are concerned, their ships are being built at Portland, Maine, and Richmond, Calif., and I am sure they are not attempting to place any orders now. Those were all placed before we started our emergency program.

Senator WALLGREN. Has Congress appropriated all the money necessary to take care of all authorizations up to date?

Commissioner DEMPSEY. Yes, sir. They have appropriated—the first authorization was for \$350,000,000. Out of those funds they have authorized us to disburse \$36,000,000 for facilities, and to construct the first 200 of the Liberty Fleet ships. Then we were given \$550,000,000 to construct 212—

Senator WALLGREN. What I am getting at, there are no anticipated appropriations that are necessary to meet any of the—

Commissioner DEMPSEY (interposing). Not to meet what we have authority for.

Senator WALLGREN. Another question there. How long has it been since any American ship—I wonder if you have noticed how long it has been since any American ship has changed its registration.

Commissioner DEMPSEY. From American to foreign flag?

Senator WALLGREN. Yes.

Commissioner DEMPSEY. We don't permit it.

¹ Morris L. Cooke, chairman, Shipbuilding Stabilization Committee, Office of Production Management, whose testimony appears in Hearings, Part 4, pp. 1131-1139.

Senator WALLGREN. Well, we did permit that?

Commissioner DEMPSEY. Oh, yes; we did.

Senator WALLGREN. But most of those ships were old-timers?

Commissioner DEMPSEY. Oh, they were ships that were more than 20 years—

Senator WALLGREN (interposing). No new ships?

Commissioner DEMPSEY. No new ships. More than 20 years of age. Any new ship constructed with Government aid is documented under United States registry for a period of at least 20 years and must operate under the American flag during that period.

Senator WALLGREN. Assuming a man comes along here with a 10,000 ton ship and he owns it and it is his own property, and he wants to change its registration—

Commissioner DEMPSEY. The Maritime Commission would say no, unless in connection with our national defense operations we felt that the ship was not necessary. There might be circumstances under which we would permit it; but it is a very difficult thing today to have the Maritime Commission approve the changing of an American flag ship to any foreign flag operation.

Senator WALLGREN. This came at the outbreak of—that is, when we passed that Neutrality Act?

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. And when the President set up the war zone, these combat areas. The minute that happened, quite a few of our American ships transferred their registration to the Panamanian Government.

Commissioner DEMPSEY. Panamanian, yes; that's right.

Senator WALLGREN. But there hasn't been any of that sort of thing done for a considerable period of time?

Commissioner DEMPSEY. No; and I think you will find, Senator, in connection with those transfers, that the Maritime Commission kept a string on those ships. In many instances they put up a bond that they could be called back, or else the bond forfeited. We have had several such cases.

Senator MEAD. Talking about transferring flag ships to foreign registry brings to mind the possibility of exploring the market for ships to transfer to our registry, and in that connection I read where there were some 200 ships seized by South American republics that belonged to the totalitarian governments. I don't know whether they are going to put them in the hemisphere trade or whether they are going to turn them over to some other country, or whether there is a possibility that the Maritime Commission will get some shipping, if not this particular type of shipping, some shipping that it might displace. But the thought occurs to me that instead of transferring our ships to foreign registry, we might be looking for the acquirement of ships, which I presume would be a difficult matter, but we probably ought to explore the possibility of acquiring ships to our registry rather than of transferring ships from our registry. Has the Maritime Commission ever made a survey of the possibilities of such a move?

Commissioner DEMPSEY. Yes, sir. We have been looking into that for several months. There is this difficulty that we encounter insofar as transferring to American flag is concerned, that is, that

our minimum requirements are so much higher than the requirements of the foreign countries—crew accommodations, things of that kind—that considerable work would have to be done on ships in reconditioning before we could use them.

The CHAIRMAN. Pay is much higher in the American registry, too, isn't it?

Commissioner DEMPSEY. Oh, yes. In the lease and lending and what not of ships, of course, we prefer a different proposition, of retaining our own ships, which are the best built any place in the world today. It would be my position, if we are going to lend or lease or charter, charter some of these ships which we are taking over rather than our own new ships.

Senator MEAD. Is there any possibility of our chartering or leasing these seized ships that are now in the hands of Central or South American Governments, assuming that they may not have the means of doing it themselves?

Commissioner DEMPSEY. Well, of course, it would be a question for those governments. They are in their custody.

Senator MEAD. It is my understanding that there was some objection to their transferring to the British registry, but there probably wouldn't be the same objection to their being transferred to our registry. I have only in mind their instant operation to help us out of this situation that we find ourselves in.

Commissioner DEMPSEY. Well, the republics have been exploring that very thing. As far as I know, there has been no decision made up to this time.

Senator MEAD. And is our Maritime Commission cognizant of the developments and in there with—

Commissioner DEMPSEY (interposing). The State Department.

Senator MEAD. With an effort to cooperate?

Commissioner DEMPSEY. Yes, sir; working with the State Department.

Senator MEAD. You haven't acquired any ships from any Central or South American countries as yet?

Commissioner DEMPSEY. No, sir.

Senator MEAD. But if there are any possibilities, you will be aware of it?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Do you need any legislation to acquire ships of foreign registry?

Commissioner DEMPSEY. No; I think the recent legislation that you have passed—

Senator MEAD (interposing). Lend-lease?

Commissioner DEMPSEY. No; the requisitions bill, which authorizes the President to purchase.

Senator WALLGREN. How many of these ships are we going to turn out here in the next year?

Commissioner DEMPSEY. Well, a year from November it would be about 360 ships.

Senator WALLGREN. Will we have the personnel to man those ships in this country?

Commissioner DEMPSEY. That's what we are setting the schools up for now, Senator, to do that very thing.

Senator WALLGREN. Can we say that we have that many unemployed in the maritime profession?

Commissioner DEMPSEY. No, no; you haven't.

The CHAIRMAN. That's the reason they are having schools, isn't it?

Commissioner DEMPSEY. That's why we have those schools.

Senator WALLGREN. But there are a great many men employed on a ship that don't go to school at all.

Commissioner DEMPSEY. That's true, but—

The CHAIRMAN (interposing). Well, the schools also help eliminate the Communists, don't they? That's one of the reasons they had the fights, isn't it, because the Communists didn't like the schoolboys?

Commissioner DEMPSEY. The Communists didn't like the school-boys.

The CHAIRMAN. That's what I thought.

Commissioner DEMPSEY. The existing legislation requires that a man be at sea a period of some 3 years before he becomes an able-bodied seaman.

Senator WALLGREN. But you figure there will be no shortage of personnel to man these ships?

Commissioner DEMPSEY. We feel that the program we have set up is adequate to meet the situation. We may be short of all kinds of labor before we are through, and we will suffer, of course, like other industry.

Senator WALLGREN. There is a little danger there?

Commissioner DEMPSEY. Yes, sir; there is.

The CHAIRMAN. Mr. Fulton, did you have a question?

Mr. FULTON. Only with respect to these ships that we built in the years before the emergency, to the extent that we need those now for the Navy or otherwise, there is a benefit, is there not, by being able to take them over at cost less the depreciated figure that has been set up?

Commissioner DEMPSEY. Yes, sir.

Mr. FULTON. And, generally speaking, has that resulted in a saving over what we would have been able to purchase similar vessels for in the open market?

Commissioner DEMPSEY. Oh, yes. Taking into consideration the total amount of moneys paid by the Federal Government to subsidize the building of ships, taking all that into consideration, those ships are now constructed—if you had gone out to the market today without this legislation which was enacted by the Congress, giving us the right to take them back at the depreciated cost, it would cost you nearly double per ship, probably, what we were taking them back for, because the price of ships is going up tremendously. I mean those that are seagoing and efficient ships.

Mr. FULTON. In connection with that program you have had some that you acquired—

Commissioner DEMPSEY (interposing). Yes, sir.

Mr. FULTON. By reason of the merchant marine having been built?

Commissioner DEMPSEY. Yes, sir.

Mr. FULTON. Then there were others that were built privately, and comparing the two, you have found it much more expensive to buy those built privately?

Commissioner DEMPSEY. Oh, very much more.

Senator WALLGREN. Well, the Maritime Commission acquired a certain number of ships at rather a low figure here a few years ago, didn't they? Many of these ships that were turned in. In other words, before this program got under way, it was possible to build ships at much less cost?

Commissioner DEMPSEY. Yes. That's what Mr. Fulton was asking about. Those ships were built at less cost, and they were built very much lower than cost today.

Senator WALLGREN. And ships were turned in to the Commission, you might say, for junk, that were later worth three or four times as much? I am just wondering whether they were able to profit a little by that.

Commissioner DEMPSEY. Well, I think we have profited by those new ships we built. We built them at low cost and we are now taking them over for different agencies of the Government, and we are taking them over at the construction cost, less the depreciated value.

Senator WALLGREN. Now you mentioned a little while ago that these ships, this C type, were costing over \$2,000,000, did you not?

Commissioner DEMPSEY. About \$2,300,000 or \$2,400,000.

Senator WALLGREN. That's quite an increase over what they cost 4 or 5 years ago?

Commissioner DEMPSEY. Yes, indeed.

Senator WALLGREN. Where does that increase come from? Labor cost principally?

Commissioner DEMPSEY. Labor cost, material cost, everything in cost. Steel is higher, labor is much, much higher.

Senator WALLGREN. I know, but that's almost four times what it used to cost.

Commissioner DEMPSEY. No; it cost about a million, six or seven hundred thousand, and now it costs a million—no, two million, three or four hundred thousand.

Senator WALLGREN. I am speaking about 5 or 6 years ago.

Commissioner DEMPSEY. Yes, sir.

Senator WALLGREN. I think you could have constructed a ship—well, no; I guess you couldn't.

Commissioner DEMPSEY. Well, you see our Commission was created in 1936. We got construction under way in 1937, and the cost then was very much lower than it is now, several hundred thousand dollars cheaper.

Senator MEAD. What about the cost of those so-called ugly-duckling ships?

Commissioner DEMPSEY. You mean the Liberty fleet?

Senator MEAD. Yes.

Commissioner DEMPSEY. Senator, they really are beautiful ships.

Senator MEAD. You are producing them under mass-production methods?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Well, they are serviceable and they fit in, in this crisis?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Just as well as any other ship?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. How many ships are you constructing under that mass-production program?

Commissioner DEMPSEY. We are constructing approximately 300 of them.

Senator MEAD. And how many other ships are contracted for in addition to those?

Commissioner DEMPSEY. About 400 ships.

Senator MEAD. And the remainder are what type?

Commissioner DEMPSEY. Tankers and the long-program ships.

Senator MEAD. And each ship represents a special plan. Is that it?

Commissioner DEMPSEY. That's right.

Senator MEAD. And that's what increases the cost, too, isn't it? Building ships by special plans?

Commissioner DEMPSEY. Well, there are the different types. The Liberty fleet are the emergency ships.

Senator MEAD. Cargo ships?

Commissioner DEMPSEY. Yes; they are all cargo ships. Yes, sir. They are of one type. The C ships, the C1, C2, and C3 ships are practically the same type, except one design is a little larger than the other; that's why we designate them as C1, C2, and C3. They range up to 12,500 tons, and some of them are being constructed at the yard at Chester, Pa.

The CHAIRMAN. Has the Maritime Commission ever given any consideration to the idea of so fabricating these ships that some of the parts can be made and cast in the interior and assembled at some construction plant, so as to keep some of our interior steel mills at work?

Commissioner DEMPSEY. Oh, yes.

The CHAIRMAN. Are they doing that?

Commissioner DEMPSEY. In some instances; yes, sir. In connection with the equipment—the engines and the various things that go into equipping a ship, the machinery—that's all been contracted for. We have a technical division that's set up under Commissioner Vickery to handle the situation. Commissioner Vickery, incidentally, is one of the most outstanding men in the shipbuilding world of today. We clear all orders for engines, steel, and so forth, and with seven or eight emergency yards running, we say what steel is shipped and what engine is shipped, so as not to permit any one yard to have a surplus and the other yard have a shortage of needed material.

The CHAIRMAN. And you are buying a lot of that material from the interior, fabricated, and shipping it to the coast and assembling it?

Commissioner DEMPSEY. That's right.

Senator MEAD. I am interested in your Liberty fleet and in the further development of this mass-production idea, and it occurs to me that in the several categories, including cargo ships, tankers, and so forth, you might have room for further development. For instance, it isn't necessary, if you are building tankers, to devise and create a new ship with every order.

Commissioner DEMPSEY. That's right.

Senator MEAD. It seems to me that if you are going into the market for 25 tankers, there might be a similarity that would permit mass production, because only through mass production did we achieve supremacy in the automobile and the auto truck, the auto bus, the air-

plane, and other transportation activities, and so if you can further develop and explore the possibilities of development in this mass-production field, I think that you have the answer, at least a partial answer, to the call for more ships and for lesser cost.

Commissioner DEMPSEY. Senator, that's exactly what the Commission is doing, and it is working out just as you have pointed out.

Senator MEAD. You have 300 now in this so-called Liberty fleet?

Commissioner DEMPSEY. That's right.

Senator MEAD. That are being produced under what might be termed a uniform standard?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. But there are four-hundred-and-some-odd ships that are what might be listed as special ships, each one having its own plans and specifications?

Commissioner DEMPSEY. No; not each one. We have three types in that category.

Senator MEAD. Of each type?

Commissioner DEMPSEY. Yes, sir; each type, but that becomes mass production, because there are about 100 of those—oh, more than that, about 150 going right now. Those are a Commission-designed ship. I think it is easily the most efficient, fastest, and best cargo ship afloat today.

Senator MEAD. That would be our only possibility to attain and retain supremacy on the seas as we have on land?

Commissioner DEMPSEY. That's right.

Senator MEAD. By offsetting cost differentials by the mass production of greater numbers, so I think you are working in the right direction, and if you can further expand that mass-production program, we might find ourselves turning out ships like we are turning out autos and trucks and busses and airplanes on a mass-production basis, and in that manner we would be able to stay in this activity. So I think that is worthy of exploration.

Commissioner DEMPSEY. Senator, on that line of thought, when we first started the emergency shipbuilding, it was believed that we could get two ships constructed a year per way, and it is now apparent that we are going to get three, and we think we can speed it up to three and a half or four by reason of just what you say.

Senator WALLGREN. Where are we going to use all these ships?

Commissioner DEMPSEY. That's our least difficulty.

Senator WALLGREN. Well, I mean at the present time there is your coastwise trade, intercoastal trade—

Commissioner DEMPSEY (interposing). All being interfered with.

Senator WALLGREN. But when this program is completed, of course, most of us like to feel—or some of us like to feel—that these ships are not going to be used to go into combat zones.

Commissioner DEMPSEY. There have been no American-flag ships entering a combat zone since the Neutrality Act was passed.

Senator WALLGREN. No; and yet we feel the need of it for our foreign trade outside of combat zones.

Commissioner DEMPSEY. Yes, sir. And I think the Commission feels that when this terrible thing now going on is over, we will be in a position to enter the trade routes of all countries and have supremacy.

Senator WALLGREN. Now, of course, under the lend-lease bill, we could lease them, though, couldn't we?

Commissioner DEMPSEY. Yes; we are leasing and chartering ships.

Senator WALLGREN. Well, these chartered ships are going into combat zones, aren't they?

Commissioner DEMPSEY. Not with the American flag on them. If we charter a ship under the lend-lease authority, that ship can carry whatever flag the charterer puts on it. It is not an American flag; and the ship is insured, and we have nothing to do with the operation of it; there are no American sailors on it.

Senator WALLGREN. But there is a strong possibility of some of these ships being used under the lend-lease program by—

Commissioner DEMPSEY (interposing). Oh, that was the purpose of the lend-lease program.

Senator WALLGREN. Surely. So then we are going to use many of them in that way?

Commissioner DEMPSEY. Why, the thought is that there will be a great many used in connection with the lend-lease program. The great need of the lend-lease program was ships.

The CHAIRMAN. We have got to carry cargo to the point where we intend it to go, and we are building those bottoms for that purpose. Isn't that true?

Commissioner DEMPSEY. Yes, sir; that's exactly the fact.

Senator WALLGREN. You figure most of them will be chartered? They won't be sold?

Commissioner DEMPSEY. Some may be sold, some will be chartered.

Senator MEAD. Commissioner, have you ever given any thought to the utilization of the facilities of the Great Lakes for the training of apprentices? To illustrate, I understand that it is possible to make arrangements with certain lines for the training of apprentices for use in the Atlantic service, and that a certain number of these apprentices might be assigned to each ship, in agreement with the shipowner, for a certain period of time, and I was wondering if there has been any arrangement made with our Great Lakes shipping lines for the breaking of these boys in for further service in the Maritime Commission or on the high seas in any American marine activity.

Commissioner DEMPSEY. Senator, our ship personnel training is under the experienced and competent supervision and direction of Commissioner Macauley.

Senator MEAD. I read of the opening of a number of schools, but it occurs to me there weren't any schools in the Great Lakes area.

Commissioner DEMPSEY. I don't recall that we have a school in the Great Lakes area. He is carefully exploring the entire situation, with a view to getting as many trainees on board ship as is possible, and our program has been enlarged recently to bring that about. Whether he will be successful in getting them on Great Lakes ships or not, I wouldn't be able to say at this time.

Senator MEAD. Well, it offers, I think, attractive possibilities, and in view of the very large trade and the security and safety of it, it seems to me that you could be breaking in a great many future seamen up there on Great Lakes vessels.

Commissioner DEMPSEY. I will be very happy to make a memorandum and take it up with the Commissioner and suggest it to him.

The CHAIRMAN. Are there any other questions, gentlemen?

Senator MEAD. I would just like to ask one question. That is, I am a member of the Committee on Commerce, and I can recall in connection with a hearing on some bill that had for its object the construction of ships, some representative from your Commission telling us that these ships would be easily convertible into airplane carriers and other ships that would be useful to the Navy in time of war.

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. That the plans and specifications called for the construction of a ship that was a convertible ship.

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Have we any such ships?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. Are they being converted?

Commissioner DEMPSEY. Some have already been converted.

Senator MEAD. Or are they giving up that idea?

Commissioner DEMPSEY. No, sir.

Senator MEAD. Converted into armed merchantmen or airplane carriers?

Commissioner DEMPSEY. Airplane carriers.

Senator MEAD. And those were ships created at the direction of the merchant marine, Maritime Commission?

Commissioner DEMPSEY. Yes, sir. What armament was put on them I do not know, but I do know there have been some converted already into airplane carriers.

Senator MEAD. And who would know that, Commissioner?

Commissioner DEMPSEY. As to what armament?

Senator MEAD. Yes.

Commissioner DEMPSEY. The Navy. You see, we have nothing to do with that. After we turn them over to them, we know nothing about it.

Senator MEAD. But a number have been converted?

Commissioner DEMPSEY. Yes, sir.

Senator MEAD. And they not only constructed them, but are they considering the continuation of construction of that type, easily convertible ships?

Commissioner DEMPSEY. Yes, sir.

The CHAIRMAN. Any other questions, gentlemen?

Thank you, Mr. Commissioner.

Commissioner DEMPSEY. Thank you, Mr. Chairman.

The CHAIRMAN. The committee will recess until 10:30 tomorrow, when Mr. Stacy May will appear and talk to us about production planned and the questions affecting priorities and small business.

(Whereupon, at 11:45 a. m., the hearing was recessed until 10:30 a. m. on June 4, 1941.)

INVESTIGATION OF NATIONAL DEFENSE PROGRAM

WEDNESDAY, JUNE 4, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING THE
NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:35 a. m., pursuant to adjournment on Tuesday, June 3, 1941, in the hearing room of the Senate Committee on Interstate Commerce, Capitol Building, Senator Harry S. Truman, presiding.

Present: Senators Harry S. Truman (chairman), Mon C. Wallgren, Joseph H. Ball, Tom Connally, and James M. Mead.

Present also: Hugh A. Fulton, chief counsel; Charles P. Clark, associate chief counsel; Hon. Frank Knox, Secretary of the Navy.

The CHAIRMAN. Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

Mr. MAY. I do.

TESTIMONY OF STACY MAY, DIRECTOR, THE BUREAU OF RESEARCH AND STATISTICS, OFFICE OF PRODUCTION MAN- AGEMENT

The CHAIRMAN. Mr. May, we are interested in the general program of the O. P. M., particularly as it affects the priorities and things of that sort, in regard to the furnishing of material, construction, and everything of that sort, and we would like for you to give us an outline of that O. P. M. program.

Mr. MAY. I shall try to do that, Senator.

OUTLINE OF DEFENSE PROGRAM OF OFFICE OF PRODUCTION MANAGEMENT

Mr. MAY. The program that we have before us now is a program that will call for expenditures of something in excess of \$40,000,000,000 over the years 1941 and 1942. I am talking calendar years, now, rather than fiscal years. There are a couple of billions, two and a half billions or so, of naval commitments that will run longer than that period, but I think I shall confine my statement to you in terms of what is in prospect in the immediate future; that is, through the present calendar year and through the following calendar year.

That program was of the magnitude of about 40 billions, and still is, although as you know there are certain things pending, such as the new bomber program, that will push those figures somewhat higher.

The CHAIRMAN. Mr. May, I want to interrupt you just a moment. I forgot to have you state for the reporter your name and your connections with the O. P. M.

Mr. MAY. My name is Stacy May. I am Chief of the Bureau of Research and Statistics of the Office of Production Management and before that I held the same general post for the Advisory Commission, before the O. P. M. was formed.

The CHAIRMAN. And what were your connections in private life, Mr. May?

Mr. MAY. Before that I worked with the Rockefeller Foundation in their social science division.

The CHAIRMAN. All right, now, if you will proceed.

Mr. MAY. Picking up where I left off, that program calls for rather heavy expenditures during 1941 and somewhat heavier expenditures during 1942. The best scheduling that we have been able to do calls for expenditures of something like 17.3 billions of dollars in '41, something like 22.4 billions of dollars for '42. That scheduling doesn't look very rational, because it would appear that if one could get as much as 17 billions in '41, one should be able to do more than 22 billions in '42. However, without burdening you with the detailed figures on it, unless you happen to want them, the scheduling is more rational than it appears, because of the fact that we have to get a great many facilities produced during 1941 if we expect to get our loads of actual munitions that are straight usable munitions in 1942; and if you rule out pay and subsistence for the armed forces, and if you rule out the expenditures of funds for industrial facilities, the scheduling of 17 and 22 plus for the 2 years is cut down to actual military items of something less than 10 billions in '41—that is, direct military-procurement items—and about 18 billions, something over 18 billions, for '42, which is quite a step up.

(Senator Wallgren assumed the chair.)

Mr. MAY. I think I should explain that initially.

In terms of our progress to date, I think it is fair to say that the rate at which we have been going, according to the best measurements that we have of it, indicates that we will have to do a lot more than we have been doing to meet these specific schedules. If you would be interested in those figures, they run about of this magnitude: For the first 4 months of this year—that is, through April 30—expenditure figures amount to about 3.7 billions of dollars. Now, if we only achieved that speed for the rest of the year, we would obviously fall far short of spending \$17,000,000,000 on defense for this year. However, the story isn't so bad as it looks, because the rate has been progressively upward, and in April—our May figures aren't complete yet, so I can't give them to you—we spent about \$1,100,000,000 on defense in the United States. I should remark, parenthetically, that all of these figures include not only our Army and Navy expenditures but our R. F. C. and other agency expenditures on defense in the United States plus British orders and other foreign orders that have been actually placed separate from the lend-lease, the defense-aid program in the United States.

Well, now, with expenditures of 1.1 billions in April, that is at the rate of about 13 billions a year. In order to spend 17 billions during this present year the rate will have to step up sharply, and without attempting to give you an orderly progression we would have to average, let's say, something like a billion and a half for the next 4 months, including May, since our figures aren't ready for that month, and we

would have to average about 2 billions a month for the remainder of the year. Thus, if for the last third of the year we averaged 2 billions a month, that would be \$8,000,000,000; if for the second third we averaged a billion and a half, that would be \$6,000,000,000, and 6 and 8 is 14, which, plus what we have spent, would give us the \$17,000,000,000. An increase in tempo of something like that rate, although obviously the actual progress would be more nearly regular than that, would be necessary if we were to meet our schedules.

At this point, Senator, I should like to say this, that I think it is not fair to judge accomplishment to date in terms of where we are on this \$40,000,000,000 program, because a very considerable amount of the \$40,000,000,000 program has come to us after the end of the last calendar year, and very considerable amounts of it, as you know, didn't come into the picture at all until April 5. Obviously, if you are judging expenditures it would be unreasonable to suppose that we could have got very much production under way or very much more spending accomplished in terms of funds that were made available only this spring.

I can perhaps give you a general picture, then, that looks more optimistic as regards our actual accomplishment in these terms, though in doing it I have to switch the base of my figures a bit, because I have been talking up to date in terms of the whole program, the over-all program, including British aid and so forth.

Until April 5 of this year, the total funds available to the Army and Navy alone for defense were 20.7 billions of dollars. This total consisted of the following items: Funds for pay roll, travel, subsistence, and other items that don't involve any production problems or contracting either, for the most part: 2.1 billion dollars.

Expenditures for military construction, equipment, and supplies during the second half of calendar year 1940, which were already expended before then: 1.2 billions.

Funds for naval construction after the end of calendar year 1941, about 3.1 billions; and the items for construction and matériel for the completion or delivery and for contracting during 1941, were about 14.3 billions.

Now, translating those figures for you into real production items for the Army and Navy, you add the 14.3 that were for actual military items for the Army and Navy, the 1.2 for the military construction during the second half of calendar 1940, some funds for the Navy that are around a billion dollars, that were for expenditures before the end of 1942, and I think it is fair to say that we have before us for the Army and Navy a military program of something like \$16,000,000,000. That is what we were working on until well into this spring.

Now, in terms of our actual expenditures on that program for this year—I am ruling out now the British and the pay and subsistence items—we spent about 3.2 billion dollars through the end of May. That is for five-twelfths of the year.

Mr. FULRON. Does that rule out the parts of the 3.7 that would be allocable to the program over and above the \$16,000,000,000?

Mr. MAY. Yes; it rules out the parts of that that were both pay and subsistence items for ourselves and it rules out the parts of that that were British contract items.

Mr. FULTON. Does that mean, then, that we practically haven't started on the program that was developed this spring?

Mr. MAY. Yes; in terms of achieving actual expenditures on it. I mean, if you are talking expenditures rather than contracts, we practically haven't started on anything that was developed only this spring for funds, but I think it would be unreasonable to think that we should have.

Well now, even those expenditures for the Army and Navy were stepping up rather rapidly, just as our whole program was, so that on these actual expenditures, in the month of May they were about \$890,000,000. That is an estimated figure because the figures aren't final on it. That means we were spending for Army and Navy procurement, in May, at the rate of about 10.7 billions a year, close to 11 billions a year, and yet we had been looking only at a program of the magnitude of about 16 billions of dollars, and always from the beginning, not too wisely but I think it is quite accurately, we set our sights perhaps too long and perhaps too low, but nevertheless we had thought of those things as being procured over a 2-year period, and most of them were scheduled for production over a 2-year period. That averages at the rate of about eight billion a year, so in terms of the funds that had been made available before this spring, I think it is fair to say that our program of actual deliveries has been going ahead, is going ahead now, at a substantially faster rate than would constitute a fulfilling of that earlier program. I put this in because I think it is a fair statement to make, that when I say that we are going rather too slowly, and that we will have to step up very sharply from present accomplishment, I am making that statement in terms of the much larger program that we now have in the picture, and I think that that statement is true also.

Well now, I think that in the matter of our procedure of measuring our accomplishment to date, that there is another way of looking at the story in terms of whether or not we should be satisfied with our accomplishment to date. I don't know that you will regard this as a tenable measurement, but it seems to me to be one.

If we take the President's statement that we are vitally concerned with the outcome of this war and that we mean to see that we do sufficient here to make certain that the Axis Powers will not win—if we take that seriously, and I should take it very seriously—then I think it becomes relevant to say, What does our efforts amount to? How much of our total resources are we putting into this effort compared with our ability to produce? How much of that ability are we really mobilizing and harnessing for defense military production, overall, for ourselves, for Britain, for the other foreign governments that we are attempting to supply to some degree?

From that point of view the figures look something like this: We spent about 4.2 billion dollars on defense during the calendar year 1940, out of a total national income of \$74,000,000,000. That is, in 1940 we actually spent about 5.5 percent of our national income on defense. I must warn you at this point that expenditure figures are not as accurate a measurement of actual accomplishment as we should like them to be. However, they are about the best figures we have. They are not so accurate as

we should like them to be, because they do contain some errors both ways. They contain some errors in that often they are prepayments on things that are not yet delivered, and on the other hand there are certain deliveries that are made, or much more to the point, there is work that is undertaken on defense, where payments lag to a considerable degree. But from certain test borings we have made we think that they probably are the best measurement of accomplishment that is available at the present time, and not too inaccurate over all.

By that measure, then, we have devoted about five and a half percent of our total national income to defense in 1940. If we spend our 17.3 on national defense during the calendar year 1941, we shall be devoting just about 20 percent, I think, of our national income to defense. I am estimating there that the national income this year will be something of the magnitude of \$87,000,000,000. That is questionable and challengeable. There are certain people who have great competence who believe that it won't be, let's say, much over \$85 billion.

Acting Chairman WALLGREN. And it possibly may be much greater.

Mr. MAY. There is a possibility that it will be somewhat greater, Senator, but according to our best judgment, and realizing it is an estimate and not a statement of fact because it is for an event in the future, I think 87 is our best estimate. If we reach that, then, and meet our program of expenditures, we will be spending about 20 percent of the national income on defense.

Mr. FULTON. Do you think you can meet that program of expenditures? It means a 50 percent increase for the next 4 months and a 100 percent increase for the next 4, according to your figures.

Mr. MAY. Not quite that, but something approximating it.

Yes; I personally believe that we can meet it if we are willing to bear down hard enough and make quickly enough a set of decisions that will lead toward sharp upplings of our production. I think it will be hard, but I think it can be done, and I have no question about as far as the 2-year program is concerned.

It is possible we will run somewhat behind this for 1941, but I think that there ought to be no question about our ability to reach the \$40,000,000,000 program over the 2 years.

Senator BALL. You actually think this \$40,000,000,000 is still far too low?

Mr. MAY. In my opinion, it is far too low, Senator.

Senator BALL. That doesn't include the new bomber program?

Mr. MAY. No; the reason I have left that out is that until that is accurately scheduled we won't know how much of those funds, because until the funds are actually available, we won't know how much of those funds will be scheduled for expenditure before the end of 1941.

Senator BALL. The O. P. M. is working on it, though?

Mr. MAY. The O. P. M. is working very strenuously.

Senator BALL. That will mean new plants, I suppose.

Mr. MAY. I beg your pardon?

Senator BALL. That will mean new plant expansion?

Mr. MAY. It will mean not only new plant expansions for fabricating the planes and the engines, but it will mean great expansions of plant for such commodities as aluminum and magnesium.

Senator BALL. Is that preliminary work under way?

Mr. MAY. The preliminary work is under way certainly, by way of planning it out and trying to spell it out in complete detail. I think that my observation of the whole program has been that in the airplane field particularly, there has been extremely careful and intelligent and meticulous planning. It has been spelled out in very great detail, tied down very minutely and specifically to facilities, and planned out to the *n*th degree. I think it is very, very good planning myself.

If I may revert for just a minute, then, to this other story that I was on, if we reach our \$22,000,000,000 goal or \$23,000,000,000 goal, roughly, for 1942, and if we have a national income of \$95,000,000,000, which I think is conservative for that year, that would be a percentage of 25—well, less than 25 percent—23 or 24 percent for 1942. I think that that is a low sight when compared to what nations who have really committed themselves directly to this war are doing, because most of them, England, Canada, Germany, are working on programs that represent at least 40 percent of their total national incomes devoted to defense expenditures; and I think it's low also in terms of the over-all job of what we have to do if we are to be sure that there is enough produced to assure a substantial margin over Germany's current production, plus a sufficiently large margin to be eating quickly and impressively into her initial advantage.

I won't take the trouble to spell those out for you, unless you want me to, but my summary then would be this: I think that continuously our sights have been too low for the job that we are tackling. I think that has been true on the basis of the funds provided at the earliest date. I think it's true on the basis of the plans which were made with those earliest funds that we were somewhat leisurely in terms of taking the smaller funds and planning to get them within 2 years. I am not discounting the difficulties of tooling up, and things of that sort, which are really very considerable, but I think we didn't make a continuous enough effort to shove those schedules back, and instead of saying, "What do we have to do to accomplish this program within a 2-year period?" saying, "If we do everything possible, how can we get this particular procurement?" I think we were perhaps too leisurely in that. And I think that according to our present program as we see it now, we will have to make extraordinary advances in our thinking and programming throughout and in our action throughout, if we are to be certain that we are going to meet these goals and anticipate the goals that are coming on top, because I would think that those loads would have to be stepped up very, very, very sharply if we are to be certain that we have this margin over what the Axis Powers are able to produce, plus what they are able to draw from their tributaries.

I don't know if you want me to say more than that, Senator, without throwing myself open to questions. I'd be delighted to try to get at what you are after, sir, if I can.

Acting Chairman WALLGREN. The committee wanted a general outline of the entire program, and you are open to questions at any time by a member of the committee. Mr. Fulton—

Senator MEAD (interposing). Mr. May, if I may interject right here, you said something a moment ago about being very well satisfied with this plane expansion program, with the output of our plane production. We had a witness here yesterday who was telling us about the production of ships for the Maritime Commission, and he went into some detail about the manufacture of this so-called Liberty fleet, which is a big order for mass production of ships of the same particular pattern. Then he went on to relate that there were a number of other categories of ships, and they were all being produced on a mass-production basis. Altogether, there weren't a very large number of ships. There were a large number of ships in total, but not a very large number of categories. They froze their models. Now, I understand that in the airplane industry they have a great number of models and they are changing the models constantly, and that is requires added tooling and added machinery and added assembly lines, and that if they'd only freeze their models, that is, their approved models that they know are effective, if they'd freeze those models, if they'd have a sort of separate research for these new changes that are recommended morning, noon, and night, if they'd freeze these models and if they'd confine them to a lesser number, the tooling, the assembling, and all the rest of the equipment would result in a greater production of planes. Have you made any analysis of that feature?

Mr. MAY. No, Senator. First I would say this, that this kind of judgment is quite beyond anything that is within the competence of myself or the Bureau that I operate. In other words, I will be delighted to say what appeals to me, I might give you an opinion on it, but it's a completely inexperienced opinion and it wouldn't mean anything. For instance—

Senator MEAD (interposing). You are not the man—

Mr. MAY (interposing). I am not the man on that. I would say this, though, I think it probably isn't a good analogy to take the standardization that is possible in merchant fleets and from that analogy say that a similar standardization and freezing of models would be practicable for airplanes.

Senator MEAD. Mr. Woodhead, of Vultee, for your information, had a very long article on this question of freezing models after they were fully approved and proved effective. I believe it was in the Washington Sunday papers about 2 weeks ago.

Mr. MAY. Yes.

Senator MEAD. I read it and was quite interested in it, and so I took time to wire all the airplane manufacturers that I knew, and every one of them said, "Yes, if the departments will freeze effective and approved models, and stop changing them constantly, we'll turn out more planes than we ever turned out before." And they added this thought: If a system of subcontracting of parts and gadgets and other essentials will be popularized, we will increase the production of planes also.

Mr. MAY. Well, I have no doubt that the statement would be true, Senator, that if you froze your models you could increase the number of planes that you turned out. The thing that I would be completely uncertain of, but would have no competency to really judge would be whether the ships that you turned out would be as effective

against newer models that are being turned out by the Axis Powers, whether the increased number of ships that you might get would be effective ships against the newer models. But that is a field in which I just have no competence.

Senator MEAD. Of course it was always understood that separate research and developing methods would be constantly encouraged.

Mr. MAY. Perfectly.

Senator MEAD. But only when we had agreed on an approved model would we go into the mass production of that model because we needed them and needed them badly.

Mr. MAY. All I could say, sir, is that very honestly it is completely beyond the competency of my outfit and it is something that we just wouldn't have an expert opinion on.

Senator MEAD. Well, nearly all the airplane manufacturers, in fact all of them that I contacted, agreed that it should be done, subcontracting and freezing of models wherein it was approved.

Senator BALL. I believe you made the statement that a \$40,000,000,000 program—

Mr. MAY (interposing). I think we should, Senator. Either way, I don't think that's something that you can achieve tomorrow, but I think that certainly should be the goal, and I base that on the fact that England and Canada and Germany are certainly devoting at least 40 percent, 40 percent or more, of their total national incomes to defense. I think that a \$40,000,000,000 program would be comparable on our part, because I think that with a \$40,000,000,000 program developed reasonably and intelligently, we could have an overall national income of \$100,000,000,000, and I think that it would represent something like a comparable effort on our part to the effort they are making.

Senator BALL. If we are going to do that, though, right now we should be broadening the base of this whole thing, making sure the supplies of steel and aluminum and all the other essential materials for that bigger production are available.

Mr. MAY. If we have any such plan, if any such plan is accepted, we should have to be broadening the base along all of those lines, and we would have to be broadening the base tremendously along the lines of the actual facilities for producing the direct military items.

Senator BALL. Well, is that being done? Are there any plans under way?

Mr. MAY. I don't think that definite plans are under way in the sense of actually preparing for expansions to meet any such program as a \$40,000,000,000 program, but then I think no such program is in sight at the present time, sir, and there are plans under way, I think, for seeing that materials are available in sufficient quantity to meet the \$20,000,000,000 program, if you like, annual program, which we actually have on the books now. I think it would be wise to do a great deal more in the way of forward planning than we have done to date, though I think it is very difficult to push that planning through very far into terms of actual commitments.

Senator BALL. It would seem the part of wisdom, in view of the fact that their estimates on this program have consistently been far too low, to begin shooting at about twice what they think, what the present schedule calls for, and maybe they'll be somewhere near the mark when they get there.

Mr. MAY. Well, I think, sir, that is true, that all of our sights should be lengthened in terms of planning, but until you have had an actual program given by Congress in terms of funds appropriated, I think it's hard to put any of it into effect, and I think you have to draw a distinct line there between paper planning of what would be necessary under certain circumstances, and taking the actual steps that have to be taken in order to put them into effect. The latter can't be done until the program has been put out and authorized.

Senator BALL. I think the paper planning, though, should be done, and from what I have heard, I understand—I don't think you would have any trouble getting authorizations. Do you have any figures on the total number of employees in this thing?

Mr. MAY. I don't have any of those figures.

Senator BALL. You don't carry any statistics?

Mr. MAY. We carry no statistics on—

Senator BALL (interposing). On turn-over or anything like that?

Mr. MAY. I am told that figures on the employees in O. P. M. have been given to the counsel of your committee, sir.

Senator BALL. What I was interested in was the turn-over. Here we set up a new organization to supervise a very vast program, set up a little over a year ago, obviously an emergency set-up. I am wondering how much turn-over there has been, whether any of the individuals responsible for these initial boners in planning have been let out and replaced by fellows that can do the job.

Mr. MAY. I have no figures whatsoever, sir, in my head, even, on turn-over or on the total employees in O. P. M. We haven't tried to keep that at all in our outfit.

Senator BALL. I have had the impression that the people that missed the boat so completely on planning for supplies of aluminum are still in charge of planning for aluminum supplies, and it seems to me that certainly if a private business were running this show, set up that kind of new organization in a year, there would be a very large number of shifts and people that wouldn't fit in this job would be put out and some fellow put in that could do the job. I haven't heard of much of that sort of thing in O. P. M.

Mr. MAY. Well, I think this is a fair answer, Senator, or at least it would be my best opinion on it. I think that if you are to point the finger at everyone who was responsible for setting sights too low, you'd include a great many people within the scope of your pointing. I think, with all due respect, that there would be administrative and legislative responsibility included in it. I think that there would be Army and Navy responsibility, and I think there would be responsibility on the part of the Advisory Commission and the O. P. M. But I think very generally the mistake was made of underestimating what we should have to do and what that would entail in our over-all society. I might say this, sir, that in all honesty I think that we began this job with singularly little background for doing it, but in making estimates on it of just what the requirements would be, that was part of my responsibility, and we tried to discharge that responsibility up to the limit of our capacities. We have tried very hard on it, and yet from the beginning we have never been able and we still are unable to get, for actual material estimates for the raw materials

that are needed, a really proper break-down for what is known as indirect militaries. We can get quite reasonable estimates for the military and the naval requirements for the direct-production items. We can make a set of estimates in terms of the over-all needs for everything outside of that, and we have labeled those "civilian needs." Now those civilian needs include indirect military, and we have always stated that, but we have never been able to measure them very accurately, and, therefore, I think a number of mistakes have been made because of that inability in terms of assuming that the direct military loads, even if stepped up rather dramatically and sharply in program, wouldn't take such a great percentage of the over-all as to make it appear that you were going to have drastic shortages that couldn't be met by cutting into civilian supplies. Now I think that has been a mistake, I think that we should have been much, much bolder than we ever have been in planning for expansions.

Senator BALL. We heard the story on aluminum here, and it seems to me that possibly the first couple of tremendous underestimates of needs might be justified, but it strikes me that after that, they would have decided that these figures they were gathering weren't worth very much and doubled or tripled them, because certainly in this emergency it's a lot better to have excess production than to be caught short.

Mr. MAY. Well, I believe exactly as you do, sir, and I have no dissent to your statement at all. But I think that there always is a judgment that must be made, and that there is room for differences of opinion as to how desirable it is to build up new capacity versus cutting in and rationing civilian supplies. I believe as you do that in the raw materials, the judgments particularly in the raw-material fields, the judgments should greatly favor new capacity whenever it is possible.

Senator BALL. We sort of wonder how long they are going to keep on underestimating and shooting too low on this thing. You said that you had something to do with planning or estimating the over-all needs on this program. Didn't you have any material that the War Department under Louis Johnson's various studies had made available, or the Stettinius report, or didn't you have any—

Mr. MAY (interposing). We had the War Department's industrial mobilization plan estimates for the materials that would be required by a 4,000,000-man army, and those were available to us.

Senator BALL. But they weren't much good?

Mr. MAY. They weren't accurate, sir, and in many cases we are using more now for actual military than were estimated for the 4,000,000-man army, and the civilian requirements were generally underestimated.

Senator CONNALLY. Mr. Chairman, may I ask some questions? Are you through?

Acting Chairman WALLGREN. Does your office study the availability of certain strategic minerals in this country?

Mr. MAY. Yes; we do, sir.

Acting Chairman WALLGREN. And you do the same in inspecting the South American markets?

Mr. MAY. We have done a good deal in terms of South American production of the strategic and critical minerals. Yes; we have, sir, rather carefully.

Acting Chairman WALLGREN. Then assuming that South American countries were able to furnish certain strategic minerals, let's just say bauxite, let's just take that, have you studied the availability of that particular mineral in this country?

Mr. MAY. Yes; we have, sir.

Acting Chairman WALLGREN. Well, what if South America were shut off from us some way, just though this war or—

Mr. MAY (interposing). May I turn this question over to Mr. Nathan of my staff, who has been in charge generally of the estimating of capacities and requirements in military lines? Is it permitted for me to do that, sir?

TESTIMONY OF ROBERT R. NATHAN, CHIEF OF CAPACITIES—REQUIREMENTS SECTION, BUREAU OF RESEARCH AND STATISTICS

Acting Chairman WALLGREN. It will be all right; we will just have to swear him. Do you solemnly swear your testimony will be the truth, the whole truth, and nothing but the truth?

Mr. NATHAN. I do.

Well, on this matter of studying the sources of raw materials abroad, we have studied the production and import and export data for a number of countries on other continents, and we have come to the conclusion that if the supplies are cut off in some material manner or through the lack of shipping facilities, of course, we are going to be very, very much shorter than otherwise in terms of basic supplies such as bauxite or let's say copper—copper is a good illustration; we are bringing in quite a bit of copper today from South America, and we are going to need more all the time.

Acting Chairman WALLGREN. What other materials are so strategic that we are forced to import?

Mr. NATHAN. There's tin, of course, and rubber, and there's kapok and manila fiber, and we are importing an increasing amount of bauxite, and there's quite a bit of zinc coming in in increasing quantities, and there's copper.

Acting Chairman WALLGREN. Are you absolutely dependent upon these other countries for these materials?

Mr. NATHAN. Absolutely dependent on other countries for kapok; we completely depend upon them for tin, we depend upon them for rubber; we depend on them for manila fiber. Right now we are depending in very substantial measure on South American sources for increased copper. If we are cut off, it's going to push us into a very much more serious effort than today of seeking out substitutes; and for those commodities where substitutes are not possible, that is to say substitutes immediately related, it is going to mean using entirely different types of materials.

Acting Chairman WALLGREN. Well, we have a great deal of copper in this country.

Mr. NATHAN. We have a great deal of copper, but not nearly enough for the present program, and as a matter of fact, there is some real question now whether bringing in all we can from South America is still going to provide us an adequate supply for the total defense effort. There is a very real question as to whether or not all we bring in of copper that can be brought in from South America is still going to give us an adequate supply. Today there are still in this country

sources of copper of the submarginal type. That may call for certain incentives or some kinds of a special provision in order to bring forth this submarginal copper. But it is very doubtful whether we possibly can be self-sufficient in copper without the South American aid, and even with all the South American aid, whether we will have enough for all military and civilian supplies.

Senator MEAD. Have they given any consideration to the curtailment of civilian supplies?

Mr. NATHAN. Yes; we have. As a matter of fact, the first question that we determined was whether or not there was going to be enough for military alone, and the second question is how much is the military and the total civilian demand; then third, how much is the capacity to produce internally, and what is the import possibility. And that gives us the residual or how much is going to have to be curtailed from civilian supply if we don't increase production.

Senator MEAD. Is that the way that you determine the number of automobiles that will be built in 1942?

Mr. NATHAN. Well, of course there is still a policy question, Senator, to be determined. When you cut civilian supply, where are you going to cut? You have a choice of cutting all automobiles and not cutting refrigerators, or to cut half the automobiles and a third of the refrigerators, or things of that character, and that is entirely in Mr. Henderson's shop now, in the allocation division. We have tried to break down our nonmilitary demands for particular commodities into the type of commodities and the type of industries into which those commodities flow; then of course the actual allocation, that is, which you are going to cut out first and in what magnitudes, is left up to the administrator of the Office of Price Administration and Civilian Supply.

Senator CONNALLY. Mr. Chairman, before we get off on this other witness and all this maze, I think we ought to conclude with Mr. May. I would like to ask some questions of Mr. May.

Acting Chairman WALLGREN. Yes. I beg your pardon.

Senator CONNALLY. I think we are getting off on a side road and are apt to wind up way down in the brush somewhere. I beg your pardon, Mr. May; I wasn't here when you started. How long have you been with the Government service?

Mr. MAY. Since June 13, I think, last.

Senator CONNALLY. Last year?

Mr. MAY. Yes.

Senator CONNALLY. 1940—June 13. Not quite a year yet.

Mr. MAY. That's correct, sir.

Senator CONNALLY. What were you before that?

Mr. MAY. I was the assistant director of social sciences at Rockefeller Foundation.

Senator CONNALLY. Now, Mr. May, you have estimated these things and spoken largely in terms purely of dollars, have you not?

Mr. MAY. That's correct, sir.

Senator CONNALLY. Well, now I wish the Secretary of the Navy hadn't left.

Acting Chairman WALLGREN. He was called away, Senator, and is going to appear tomorrow at 10:30.¹

¹ Although scheduled to testify before the committee the following day, Mr. Knox did not appear due to pressure of business.

Senator CONNALLY. I know, but I wanted him to hear some of this. The Army is supposed to know what it needs and what it wants, isn't it?

Mr. MAY. It is certainly supposed to, sir.

Senator CONNALLY. It has been trained, supposedly, all these years, has trained officers and trained staffs. And the Navy is supposed to know what it needs. Now is the function of the O. P. M. to help the Army and the Navy, or to take them both over and run them?

Mr. MAY. I certainly don't think it is their function to take them both over and run them, sir. I think it is the function of the O. P. M. to help with production problems that prove difficult, in terms of getting the procurement of the items that the Army and the Navy want.

Senator CONNALLY. Well, you went on to talk awhile ago, though, about the mistakes that had been made in the planning and all this sort of business. Were you referring to the Army and Navy planning for their own needs, or were you referring to the O. P. M.'s planning for both civilian and military needs in aiding the Army and the Navy to get what they thought they needed?

Mr. MAY. I think that I was referring to general judgments made by everybody all along the line, sir. But a great deal of the story on facilities and on raw materials that are needed require additional work than the statement of the end products that are wanted, sir.

Senator CONNALLY. Well, it occurred to me—I just was an interested bystander—that it seems to me that the O. P. M., generally speaking, was arrogating to itself a supercontrol over both the Army and the Navy, and was not really sticking to what I thought was their function, largely advisory, in assistance to the Army and the Navy. In other words, then, you are supposed to have Army and Navy men that are trained in the matter of these contracts and their needs, and yet I understand you can't get a contract through down there unless the O. P. M. looks it over and sends it around through its different staffs, and so forth and so on, and then goes over back to the Army and the Navy for clearance. Is that true?

Mr. MAY. It is true that contracts over a certain amount, sir, have to be cleared by O. P. M. before they are let.

Senator CONNALLY. Most of whom have been in the Government service about a year, I suppose?

Mr. MAY. I think that's probably correct for a great many of them, sir, though I know that a number of people on the staffs have been there for much longer periods.

Senator CONNALLY. Well, now we have been appropriating and continuing to appropriate very large sums requested by the Army and the Navy. Would you say those sums are not enough, or inadequate?

Mr. MAY. As a personal opinion, sir, I think they are not adequate to the job that we have to do.

Senator CONNALLY. Did you ever serve in the Army for any length of time?

Mr. MAY. I served in the Army for about 18 months only, sir.

Senator CONNALLY. Have you ever served in the Navy?

Mr. MAY. Never served in the Navy.

Senator CONNALLY. Have you discussed these matters with the Secretary of War? Have you told him you didn't think he was

speeding up like he should? The Secretary of the Navy, Mr. Knox here?

Mr. MAY. We have turned out reports, sir; in general we have turned out reports that have gone to the Secretary of War and the Secretary of the Navy; yes, sir.

Senator CONNALLY. Did you point out the particulars in which their program was weak and hadn't been up to standard?

Mr. MAY. Yes; we have—let me answer your question in these terms, I think, quite fairly. I don't think we have submitted reports to the Army and the Navy stating that we thought that the program was not sufficiently large, although in some of our reports we have tried to indicate some of the things that other countries were doing and showing what our country was doing comparatively. But we have consistently turned out reports that attempt to show what progress is being made on the enacted program which, I think, is one of our very major responsibilities, and when we have thought that progress was behind, the reports have always indicated it.

Senator CONNALLY. Well, now your function is statistics particularly. Is that right?

Mr. MAY. That is correct; yes, sir.

Senator CONNALLY. Do you have anything to do with policies other than—

Mr. MAY (interposing). No; we have nothing to do with the framing of policies, sir, except insofar as the record of what the statistics show might suggest policy, but we have no responsibility for framing policy.

Senator CONNALLY. Don't you think it's sort of getting on the edge of policy when you testify that we must spend \$40,000,000,000 annually, in terms purely of dollars, without telling us where that money should be spent and what it's for, and all that sort of business?

Mr. MAY. Well, in terms of my statements here, sir, I discussed with your counsel yesterday what he would like me to testify on, and he told me that he wished me to give you my personal ideas about adequacy of program in over-all terms, and I have tried to do that, though I don't think it is part of my official responsibility to do so.

Senator CONNALLY. That was all published in the press, though, before you testified, wasn't it?

Mr. MAY. Yes, sir; it was. I was asked to state whether I thought the program that we were preparing fast enough, and I stated a personal opinion at that time.

Senator CONNALLY. Well, of course, all of us want to prepare as rapidly as possible, and as expeditiously, and as efficiently as possible, but I am not a soldier and not a naval man, and so we have had the thought some way or other that the Navy and the Army thought they knew or ought to know what they needed and ought to have a program, and we have been, on the Hill here, trying to meet that program. The O. P. M. has in law no legal authority except as it derives its authority from Executive orders to award contracts or to do anything else. Of course, the President could issue an Executive order that no contract should be made by the Army and Navy where the legal responsibility rests unless it is cleared through the O. P. M. Since the President is also head of

the Army and head of the Navy, that is possible. But I have been rather inclined to believe that some of the delay and some of the slowness belongs right over there in the O. P. M., rather than to speeding things up. I may be in error; I hope I am. How many different bureaus over there do matters have to clear through before they get the green light?

Mr. MAY. How many different bureaus in O. P. M., sir?

Senator CONNALLY. Yes. You have subdivisions, you have two O. P. M. chiefs.

Mr. MAY. Yes; but it isn't true that matters have to clear through all divisions.

Senator CONNALLY. No; I wouldn't say so.

Mr. MAY. They are referred to a particular division that has jurisdiction over that particular field, and after an opinion is given by them, they go directly to the section that clears contracts, with whatever recommendation they make.

Senator CONNALLY. You don't know how many men are employed in the O. P. M.? How many people?

Mr. MAY. I do not have the figures on that, sir.

Senator CONNALLY. How many have you in your bureau, statistically?

Mr. MAY. About 200.

Senator CONNALLY. About 200 in statistics alone?

Mr. MAY. About 200 in statistics alone, sir. I am told that Germany has about 6,000.

Senator CONNALLY. That has nothing on earth to do with what Germany's got. I am asking you how many you've got.

Mr. MAY. About 200, sir.

Senator CONNALLY. You seem to have been proceeding very well in that regard; I don't know about these other regards.

I reckon that's all.

Senator MEAD. Mr. Chairman. Mr. May, I know that you realize that the Congress is very anxious and has indicated by its efforts in the past to cooperate with O. P. M., the War Department, Navy Department, and every other department.

Mr. MAY. Perfectly.

Senator MEAD. It has been very anxious to cooperate in every way possible. We are all partners in the biggest job we ever tackled. But we are taken by surprise, and probably you are, probably the Navy is, and the Army is, probably the President is. As an illustration of the fact that we are taken by surprise, we read in this morning's paper that the East faces a gasoline shortage, and then we read down as one of the subheadlines, "Standard Oil of New Jersey Plans to Sell More Oil to Japan with Full Knowledge of American and British Governments." Then we see over here on page 5 of the same paper that the House Rules Committee is beginning an investigation of the huge supplies of United States war materials that are to be licensed for shipment to the Axis Powers and to Russia. Then we have a Member of Congress saying that 900,000 barrels of high-test gasoline have been shipped to Japan alone during March 1941, and how we face gasolineless Sundays. Well, now that isn't an isolated case, because I think that we will recall that we were told that if we had 400,000 well-trained men in the Army, we'd have an Army that

we could expand any time when actual war or an actual emergency was upon us; and just recently we were told that we need an Army of 4,000,000. Now, in the beginning we were given an outline of our airplane needs, but this big bomber program wasn't in it at all, and we were again taken by surprise. You thought, or your department thought, we'd require about 400,000,000 pounds of aluminum, was it?

Mr. FULTON. No; 700,000,000.

Senator MEAD. I mean the initial estimate, and then it jumped to 700,000,000, and all of a sudden it was 1,400,000,000.

Mr. MAY. That's right.

Senator MEAD. What I am trying to get at, this all happened within a year, and it isn't your fault, nor is it our fault. Would it possibly be the fault of some organization that is to gather information as to the military might that we might be pitted against? Would it be that we lacked information as to the efficacy of the bomber and we neglected it? Is it possible that we didn't know anything about our gasoline and our oil reserves, and would it be possible that in the estimates in which we failed with reference to aluminum, it's the uses that the aluminum was to be put to, and we didn't have the uses in the first place? I wonder if it would possibly be a lack of intelligence, a lack of intelligent information that the President of the United States and the Congress of the United States and the War and Navy Departments received in the first place?

Mr. MAY. Well, I think this, Senator: I think that it has been a failure less, perhaps, in straight information than it has in foresight. I take it—I haven't read this particular oil story as yet, but I take it from what I know of it—that it isn't anticipated that there will be a shortage of oil reserves. The question is a question of the shipment of oil, as I understand it, into the East in sufficient quantities to meet what have been our civilian needs of oil. This comes about because we have diverted certain tankers from that particular service to other service. This sort of thing has been happening continuously in this program. That is, we started with a conception, perhaps—all of us, when I say "we," perhaps partly the Army and the Navy also, for all I know—of a war something like the last war; and then it has developed very differently, and in terms of the differences of development there have been different conceptions of what need there is.

Senator MEAD. It occurs to me that we have civilian and military and naval representatives all over the world, and they ought to know the type of tank, the type of bomber, the type of ship, and the resources that we have to utilize to face an enemy, either a potential enemy or a theoretical enemy; but it occurs to me that, all of a sudden, after planning to build certain types of airships, we are told to change the program—bombers is the need. And so I feel that this program has been rather a series of surprises, and a series of rapid expansions, and in tracing its development we find that in the billions that are allocated for our military defenses those that have the letting of contracts, in order to do an expeditious job, will just lay another 50-million-dollar contract on one of the biggest companies in America, that already has enough for 1941, and then another contract of 150 or 200 more million is given to the same company; so that, when it is all recorded, most of the contracts are superimposed upon an already burdened contract carrier that has too much business to do and won't be able to finish it

until 1944. I think we found out that if we made an investigation we'd find that Bethlehem Steel, the United States Steel, the Standard Oil, the General Electric, the Westinghouse Electric, have altogether more contracts than they can carry, and we haven't considered—and the same is true of the Aluminum Co. A witness told us that, so far as he was concerned, he was laying contracts before the Aluminum Co. and wasn't thinking about developing other companies. I think that if we would encourage small plants that are idle, or partly idle, we would bring in a large reserve of skilled mechanics that are working in these small plants.

I read Sunday where a small plant down here in Virginia got their first contract since the national-defense program went into existence, and as a result machines that weren't working, veteran workers that couldn't find jobs were brought into the defense program, so that if we expand with a bits-and-pieces program like they have in England, and bring in all the small plants as subcontracting plants, we'd find that a great reserve of skilled workers that are too old to find jobs in these big industries would come in, and we have to augment that by arbitrarily or some other way raising age limits. Mr. Lubin told our committee that in southern California they raised the age limit, I think he said 10 years, and they got thousands of skilled workers by doing that.

Another move, I think, that you ought to consider, or your agency, in addition to subcontracting and in addition to bringing all these small plants and all these older workers in, is a method whereby they could readily secure the credit they need for plant expansion. There isn't a dollar's worth of credit for a small businessman unless he has a Government contract in his hands, going into the bank, and so unless we are going to utilize this vast resource, we are not going to reach the goal that you are talking about, and we have just been too busy clearing the desks of contracts and giving them to big, going concerns, without exploring the possibility of giving the little fellow a chance to do something toward this national-defense program. He can't get the credit. He has the plant and the facilities, but he lacks the contract. So I believe that in planning for the expansion of the program to meet your estimate, we have got to go outside the Aluminum Co. and the Steel Co. and the other company that has been getting contracts in the past.

Mr. MAY. I believe that quite thoroughly, Senator. I subscribe to that, what you have said, up to the hilt, because I think it is quite true that we will have to go much deeper, we will have to spread our contracts much wider, we will have to make use of industrial facilities that have not yet been put to defense use, on a very, very much larger scale than we have done, both, I would say, to meet our present program and to step that program up, as I think it will certainly be stepped up regardless of whether or not it reaches the dimensions that I have talked about.

Senator MEAD. I am glad to hear you say that, and I hope that you will make a contribution toward the expansion of this program so that the little fellow will come into his full share of the burden.

I think we ought to also explore the possibilities of diversion or leakage of strategic materials or materials and resources that are limited, particularly to Axis Powers. I think we ought to have an analysis of all the resources that are slipping out of this country and going to

countries where they may be used to our injury. That ought to be studied.

Mr. MAY. There is an export-control section, you know, sir, under General Maxwell, that is specifically charged with responsibilities in that field. I agree it is a tremendously important one.

Senator MEAD. The articles that appear in the paper indicate that there is something lacking there, too. However, we are doing a very, very necessary job, and we need the cooperation of everybody, and the attitude that you express is, in my judgment, admirable, but it occurs to me that this entire program is a series of surprises and that in the beginning, way back there in the beginning, we didn't have the information, and somebody, somebody who should have been over there and who had the opportunity and the intelligence and experience enough to make a study of it, should have given us that information; and we ought to know now whether or not the Axis Powers are using the French factories for the manufacture of airplanes and utensils and equipment, and if so, in what amount, and we ought to have all that information. I don't say that we ought to have it publicly, but your agency ought to have it, the Army and Navy ought to have it.

Mr. MAY. We have tried to get everything we can on it, sir. It's very, very hard to get any information on the amounts that Germany is able to divert from these areas, but we can and have gotten together figures in terms of the last available capacity figures of Germany and the Greater Reich, and of the specific areas that Germany now controls, and at least that gives us, I think, something of an over-all or an upper limit that Germany now has to draw upon. Of course the type of thing that we probably miss, or we are very apt to miss by that method, is the expansions that Germany herself is making, and no doubt they are very large.

Senator MEAD. We should have information as to the expansions Germany is making, and especially in these conquered countries.

Mr. MAY. I think that is correct.

Senator MEAD. I don't mean in the expansion of this military program that we should shut down on our civilian program. I didn't want that information to get into the record. I rather believe that in the curtailment due to a lack of materials of the civilian program, the shop capacity and the workers should be taken over into the military program. In other words, I feel that the limitation of automobile production is not severe enough. I think that O. P. M. probably took the biggest year in the history of the automobile business and then they cut down 10 or 20 percent—what was it?

Mr. MAY. Twenty percent.

Senator MEAD. Which actually allows them to manufacture enough automobiles for a normal year. Now I wouldn't want them to close the automobile business, but I would want the military program to creep up on the automobile business and take over some of its plant, some of its personnel, and keep it all busy.

Mr. MAY. Well, Senator—

Senator MEAD (interposing). But to curtail it sufficiently to insure the military program's proper expansive development.

Mr. MAY. May I say this: I think that is not only right, but I think it's one of the most important ideas that we can be work-

ing on, for this reason, that there are in numbers of the most important strategic and critical materials shortages in terms of the over-all demand that will come from both the civilian demand plus the military needs. There will have to be curtailments. If you get curtailments simply because there are not materials enough to go around, I think you should do whatever expansion there you can do, but if you get them from that form, then inevitably there is a dislocation, the plant doesn't get the material it needs, it has to shut down. It, we then hope, will come in and try to get defense orders. The dislocation has taken place not only in that plant, but the dislocation is passed on from that plant, because it stops ordering from its suppliers of materials and it stops ordering from its sub-contractors who have done part of its fabricating work. There is unemployment and dislocation all along the line. If you go to them and say to them, "Look, here is a contract for military procurement, and we wish you would take it," and if you can get them to take that specific contract and to divert their men from the civilian production to the military production, there is relatively little displacement, if any, and even to a considerable extent, because you ask them to do in military procurement something reasonably analogous to what they have been doing before, they tend to bring in their sub-contractors with them and their sources of supply with them, and I think it's extremely important that we should be doing our utmost to bring in new facilities from the civilian field into the military field, at least as fast as they are apt to be cut down through the shortages of material, because in the one way I think you do relatively little harm and a great deal of good on the military supply, and in the other way I think you cut down your over-all story and make the defense burden harder to bear and cause dislocation generally. So I think it is a very important idea.

Senator MEAD. I think you are quite right there. It seems to me that small business has two opportunities to secure finance enough to get into this defense program, but even though those methods of securing finance are very difficult, after they secure the finance it is very difficult for them under the present system to keep securing contracts. Now, a small enterprise might be able to come down here and present a contract to the R. F. C. and get a loan based upon the value of that contract. But if that small business enterprise hasn't the contract, but it's going to go into the field in an attempt to secure a contract, it might get the promise of a contract, it might own its plant, but it might need machinery. Well, they then may be able to come down here and get a loan to purchase machinery, or the machinery will be purchased for them and leased to them for the duration, but then again they find it difficult to get contracts to keep that machinery busy.

Now, then, the R. F. C. isn't interested in them except that if they got a contract they may talk about giving them a loan. The O. P. M. isn't interested in them, because they want to get these contracts out with contracting firms that will actually deliver, even in 1942 or 1943. Somebody ought to be interested in it. The plant is there, the machinery is there, the skilled worker is there, and we need that contact with them that will see to it that they get their contract, the machinery and the money.

Mr. MAY. I agree with that, sir. Of course, there is an agency within O. P. M., as you know, that is specifically charged with developing that kind of a program.

Senator MEAD. And they have representatives out in the States?

Mr. MAY. And they have representatives out in the States and they have—

Senator MEAD (interposing). Of course, that organization isn't set up yet in its entirety. In some States they haven't made the appointments.

Mr. MAY. That may be true, sir, but they do have—

Senator MEAD (interposing). The Federal Reserve Banks, I understand, are not deeply interested in developing this subcontracting program I am talking about.

Mr. MAY. Well, I agree that it must be developed—

Senator MEAD (interposing). It isn't emphasized at all. There are too many hardships. We find them every day in our offices, trying to get into this contracting work. A national organization representing the manufacturers, and I believe the State organizations representing manufacturers, perhaps small manufacturers, they are down here, and they are looking for a part in this program. At any rate, I just bring it out that it seems to me that unless you bring them into your program, you will never reach the mark that you have set as being necessary.

Acting Chairman WALLGREN. And Senator Ball?

Senator BALL. Mr. May, I would like to ask one question about what Senator Mead was talking about. Did your division ever make a survey of plant facilities? I am thinking particularly of smaller plants throughout the country.

Mr. MAY. No; we never did, sir; in just those terms, although we worked with some agencies that were attempting to gather together that information. My own feeling about it would be this, very definitely. I think that there is a limited value in attempting to get a blanket survey of what facilities are available until you know what it is that you are looking for. I think we are now in a state where we have orders out for most of the important procurement items that we wish to get. I think by far the better procedure—and it is one that we are working on now, and I hope it is going to be put into effect immediately—is to take the items that we want in much greater quantities than have yet been contracted for, and that we know we wish in such quantities, to go into the plants that are already fabricating those items, to see exactly what the floor space and what the specific machines are that are at work in those plants for turning out a given number of units of that particular military item, and what the labor force is, and then knowing exactly what we are looking for in terms of the specific facilities, tool by tool and machine by machine, you will know that you want, in order to produce the number of items that have not yet been contracted for but that are in your program, or even to plan ahead for greater procurement that may come in the future, you will know that you need, because you can look right back at your going establishment and see what it has for a certain production unit, you will know that you will need X times that number of millers and grinders and lathes of this type and that type.

I think that if we can get together that material—and we are trying very hard to get it at the present time—we will have something to

work with, and we will be looking for specific things instead of just taking the blanket over-all story of what machines are available where.

I will say this, though, that the National Industrial Council, a trade association kind of organization, did send out questionnaires all over the country to try to get inventories of machines on hand, including statements of idle machines, and their tabulations have been made available. There have been a number of other more detailed and careful studies with larger returns made in specific States. That material is also available. The American machine tool industry has in one way or another sponsored a number of studies of just where their important machine tools have gone in the last ten years. I think we have quite a lot of information as to where to look for specific machines, and I think that the information we need is exactly what machines are we looking for for specific purposes, because the blanket story is not sufficient. You have to know just where you want them and for what purpose.

Acting Chairman WALLGREN. Any further questions?

Senator CONNALLY. One other question. In connection with that, isn't the trend, though, to give most of these contracts to big concerns, recognized concerns, rather than to insist that they let subcontracts or go out among the smaller manufacturers?

Mr. MAY. I think there has been a tremendous effort to induce the larger manufacturers to subcontract, sir. It hasn't been an enforced effort. There has been no enforcement back of it.

Senator CONNALLY. Well, they could enforce it if they wanted to when they let the contracts, couldn't they?

Mr. MAY. I think it could possibly be—

Senator CONNALLY (interposing). Why, certainly. It is in the contract that they have to subcontract wherever they can. A big concern that already has all it can do, and then they dump on another great big contract, of course it's not going to refuse that new contract, although it may not be able to fill it at once, but I think that it is very clearly discernible in the O. P. M. and the War and Navy both to give most of the business to the great big, well-recognized, capable concerns. That's perfectly natural, if you had nothing to do but just to sit down and wait for the contract to be performed. But it seems to me like the O. P. M. could very well direct some of its attention to getting this work out into the smaller factories that will no doubt be diverted from a great deal of their civilian activity. I know that I have had complaints and applications from small plants that they couldn't get enough material for their ordinary normal wants, and yet they couldn't get in on the war contracts at all.

Mr. MAY. We have, Senator, a listing that is kept up to date of all contracts let of \$10,000 and over. If your committee would be interested in it, I shall be very glad to send over that listing to the committee, with the last supplement that brings it up to the end of April, if you want me to.

Senator BALL. Has your division ever made a study of, say, one specific large prime contract to determine just what percentage of that contract is subbed out?

Mr. MAY. Yes, Senator; we have—I would be glad to send you that also—we have a sample study that was made up very genuinely as a random sample, by pulling out a dozen or two different types, on a

random basis, and then found out from the concerns how much of that was subcontracted, and from many of them found out what their material orders amounted to that are not real subcontracts, but where they purchased their materials. I have that assembled, and I would be glad to send it to you.

Acting Chairman WALLGREN. We have that on file.

Mr. MAY. We have now, though, sir, a questionnaire out from our bureau, asking all prime contractors who have contracts of \$50,000 and over to identify for us and locate all of their subcontracts of \$25,000 and over; and I hope that within about a month we will have that substantially tabulated, so that we will know more about it.

Senator BALL. Do you recall what this random check shows, what percentage of these prime contracts are being subcontracted?

Mr. MAY. The random check won't give you any averages, sir, that mean anything, because they vary from a concern that has one subcontract to concerns that have 50 and 60 percent of their output subcontracted, and sometimes at least that much including their material orders, and it shows—

Senator BALL (interposing). Isn't the belief that at least 60 percent of these prime contracts should be subcontracted? Isn't that the case in Germany? Isn't that how they have attained their production, by subcontracting every part possible, scattering them out?

Mr. MAY. They have done a great deal toward subcontracting in England and in Germany both, sir, but I would be very, very hesitant to make up a blanket rule that you could apply from one field to another field. I don't believe it can be done. But I do agree that we ought to be doing more subcontracting than we have done to date.

Mr. FULTON. On that, Mr. May, of course, in some cases 10 percent would be a large amount of subcontracting in view of the nature of the article; in other cases 80 percent wouldn't be too much.

Mr. MAY. That is right, and you have to differentiate. If you are talking about dollar value of the contract, in some contracts the materials alone are not subcontracts and are never counted as such, but the material purchases alone might amount to 30, 40, 50 percent of the contract.

Mr. FULTON. With respect to this questionnaire that you sent out, have you asked those people to compare the percentage of subcontracting on defense work with the percentage of subcontracting they did on their own work?

Mr. MAY. I don't think we have asked that question in exactly that form, sir.

Mr. FULTON. Unless you do, how would the answers be worth very much from the standpoint of determining whether they really are doing a good job of seeing to it that they use subcontracting to the utmost, in view of your answer that it may vary as much as 10 to 80 percent?

Mr. MAY. I don't know that it will show you that, though we have a number of questions, I think, that will lead into that. We do ask this question specifically: Will you identify for us the subcontracts that you have out on this work which are for work of the sort that has been done formerly in your plant? And I think we will get some measure out of it.

Mr. FULTON. Do you ask the converse question, what work are you doing in your plant of the type that you formerly subcontracted?

Mr. MAY. I would rather send you a questionnaire form over, because I haven't looked at this for a month and I don't think I can give you with accuracy the exact questions that were asked.

Mr. FULTON. That field is one that Mr. Mehornay would be familiar with and could testify on, I understand.

Mr. MAY. Yes; and of course we checked this questionnaire through with Mr. Mehornay and the Army and Navy and others before we sent it out.

Mr. FULTON. And he, I think, will be a witness within a week.

Mr. MAY. He can testify on this field very accurately for you.

Mr. FULTON. With respect to your testimony on the size of the program, I understood you to say it originally was a \$16,000,000,000 program, now expanded to 40.

Mr. MAY. I qualified that a little bit, sir, in these terms, that when I was talking about the \$16,000,000,000 program, that was for the Army and Navy part of it only, ruling out such things as R. F. C. and the British orders in this country. That was simply because the data I had could be broken down only in that form; I couldn't break them down for the whole story in the time allotted since I saw you yesterday before coming over here. I would be glad to try to do it for you and do it accurately.

Mr. FULTON. My only point was, would it be fair to say the program has been more than doubled?

Mr. MAY. It is perfectly fair to say that the program has been more than doubled; yes.

Mr. FULTON. And that in spite of the fact we have not yet instituted an Army of 4,000,000?

Mr. MAY. Oh, yes. You see, our first program was instituted on the basis of an army of 1,200,000, but the great increments in the program have been only partially increments in the Army program. They have been very importantly the lend-lease, and the increments in British orders, and things of that sort.

Mr. FULTON. But those together would not explain the great increase, would they, or even half of the great increase that we have had today? I was leading up to your point of the inability to estimate whether we have yet reached the maximum. I wanted to know whether the original program as contemplated had already been expanded very, very substantially.

Mr. MAY. It has been increased very substantially in terms of the Army's own procurement program, in terms, of course, of the lend-lease added on top, in terms tremendously of the airplane program which is not tied to number of troops in the same fashion.

Mr. FULTON. And has part of that increase been due to increase in cost beyond the points that were originally estimated?

Mr. MAY. Yes. I can't give you the percentage of it because I haven't got it in my head and I don't think I have it with me in any form, but there have been some appropriations, I think, asked for on the basis of increases in original estimates of costs of certain items.

Mr. FULTON. And irrespective of appropriations, has there also been an upping of cost which has not yet been reflected in appropriations, so far as your statistical analyses show?

Mr. MAY. Do you have an answer to that, Bob?

Mr. NATHAN. No. We do not have the break-down of appropriations now in terms of how much is for liquidation of things at higher cost

than originally estimated. The main thing is, you have your \$7,000,000,000 lend-lease and you have over \$3,000,000,000 of British orders placed before lend-lease, and you have a big airplane expansion which doesn't reflect itself in any increased manpower in the Army in any sense, and you have additional requirements for the men for an additional year—as you bring in new men you have to have new equipment, particularly related to the personnel as such; and, of course, there has been an enlargement of certain types of military matériel. All of those add up to this doubling.

Mr. FULTON. And could you tell in any way the amount that is added by reason of failure to estimate costs?

Mr. NATHAN. No.

Mr. FULTON. Because, as I take it, the three billion seven of actual accomplishment the first 4 months of this year did include any increments in cost there may have been.

Mr. MAY. Yes; they were actual payments, and if there had been any increments in the costs of any items, that would be included there. I know that there have been some, sir, on the construction story, and I know that some construction costs have been higher than were originally estimated, but I haven't any figures that I can give you now in terms of any generalization of that.

Mr. FULTON. Generally speaking, a statistician, of course, no matter how good his analysis may be, is dependent on his source of information, is he not?

Mr. MAY. Perfectly. You have to take the materials that you get and work with those materials. If the materials you get are not accurate and you can't discover that, you will have errors in your calculation, that is unquestionably true.

Mr. FULTON. There, of course, have been errors in the case of some of the major materials, and one thing the committee was interested in determining was the source of the error, so far as that is possible.

With respect to the planning that has been done ahead of time, I understood there had been plans, as you have stated it, for an Army of 4,000,000.

Mr. MAY. That is right.

Mr. FULTON. And those plans included, did they, a break-down into bills of materials of each item?

Mr. MAY. They did not include any bills of materials, sir, for any item, but they gave the over-all estimates of the Army of the total raw materials that would be used on the total program, and they gave an estimate of what civilian requirements would be in the first year of an effort and in the second year of an effort.

Mr. FULTON. I understood you to say those over-all estimates were not found to be accurate.

Mr. MAY. The over-all estimates were found to have great inaccuracies in them, sir, and we do not depend upon them.

Mr. FULTON. What I would like to know is how anyone could make an estimate of the total amount of material you would need if you didn't have a bill of materials for the items you intended to manufacture.

Mr. MAY. Of course, we arrived at that same conclusion, and therefore Mr. Nathan who in my Bureau was in general charge of this, has made it his constant effort to get bills of materials for the specific procurement items.

Mr. FULTON. But it is an effort you have had to make because such bills of materials were not in existence and were not furnished.

Mr. MAY. They were not centralized, sir; may I say that? And the Army has been cooperating with us in getting them, and I think that they have allowed us to send one of our men out with some of their men to their various arsenals and places of that sort, and we are developing, I think we have developed now for the major procurement items of the Army, a set of bills of materials that I think will stand up very well.

Mr. FULTON. But it is something that wasn't in existence even after this so-called 20-year period of planning.

Mr. MAY. They weren't available in Washington, sir, and they weren't available in any centralized place or form.

Mr. FULTON. Do you know, can you explain to us, how they calculated the total amount that was to be required in order to produce the articles when they did not have bills of materials? Just how did they go about calculating it?

Mr. MAY. I think that what happened was that the Under Secretary of War's office asked the various supply divisions of the Army to give him estimates of what the 4,000,000-man effort in terms of the procurement items that were listed would entail. I think according to the best knowledge of it that we can get, that probably there wasn't a completely consistent pattern of procedure on the part of the various supply bureaus.

Mr. FULTON. How did they go about making up the estimates without bills of materials.

Senator CONNALLY. Mr. Chairman, the witness has already said he didn't know anything about it. He is guessing at it. I don't see any use in spending time on that. If he doesn't know how they proceeded, why kill time guessing at it?

Mr. FULTON. In the case of these inaccuracies you have referred to, can you tell us specifically on matters that you do have knowledge of, some of the types of inaccuracies that you found, and the results that those had in the O. P. M.'s calculations as to quantities of materials that would be needed?

Mr. MAY. I think it is our general observation that the Army's estimates of what the civilian requirements would be were consistently too low; lower than actually occur, in fact. Second, I think that in many cases, specific items were low. I haven't checked through carefully enough, though I have looked at several of them. In a number of cases their estimates of the raw materials that would be required on the 4,000,000-man effort were substantially less than the estimates that we get by multiplying bills of materials by the particular production schedules on the present effort. In other words, I think it is only fair to point out this, I think there have been very substantial changes since those estimates were made as to the amount of mechanized equipment and the type of mechanized equipment that would be required for a given number of troops. I don't know how much of this discrepancy that I speak of can be charged to that, but I should think it would be considerable. That is, the whole conception of how much you need in the way of mechanized equipment has been stepped up very sharply.

Mr. FULTON. Yes; but by dividing the number of pieces of a cer-

tain type of mechanized equipment into the total you would be able to take care of that factor and still find inaccuracies.

Mr. MAY. You would, but we were not initially able to get it in that form. Now you are talking about bills of materials, and those bills have been developed by the Army and are available now, and we use them constantly, and that is exactly the way we proceed. But when we started they were not available in Washington.

Mr. FULTON. If you cannot thereby be accurate with respect to the direct military needs, it would, of course, be hopeless to try to be accurate with respect to the indirect military needs.

Mr. MAY. Yes; I assure you it is extremely difficult to get your indirect military needs, sir. There are numbers of reasons for that, but it appears obvious, I think, on the surface, that until you get your contracts out and until you know how much work will be done in existing plants and with existing equipment, and how much of it is procured through building new equipment, you don't know what the steel requirements, let's say, for new equipment will be. All of it is difficult to do in advance, I can assure you.

Mr. FULTON. And then, of course, finally, in the case of most materials, except aluminum and magnesium, and a few others, there is an unquestioned surplus over and above military needs and it is just a question of how much or how little is to go to the civilian.

Mr. MAY. That is right; and all the way down the line, since we keep a record of the prime contracts but know to date very little about the subcontracts and just where they go and just what machinery they have ordered, and things of that sort, it is extremely difficult to get together your indirect militaries; but on our over-all civilian, I think we have a reasonable method for getting the over-all picture, because the military procurement will demand new materials and make demands for materials something like, well, perhaps in an exaggerated degree, but something like the same proportion as civilian demands in that field will make, the same general fields.

Mr. FULTON. And even civilian demands are difficult to estimate because changes in national income have varying effects on different civilian areas.

Mr. MAY. That is right, but there has been a good deal of work there and we have always tried to estimate the civilian needs in terms of estimates of the national income and in terms of their record of response of the civilian demand in these fields to varying levels of the national income.

Senator CONNALLY. Let me ask a question right there. The military and naval needs come first, don't they?

Mr. MAY. Yes, sir.

Senator CONNALLY. Why spend so much time talking about the civilian needs? We ought to get everything that the Army and Navy needs, and the civilians will have to get along on what is left, isn't that it?

Mr. MAY. No, not quite, sir; for this reason.

Senator CONNALLY. Then are we going to slow up meeting the military and naval requirements in order that a man may run his old jitney on Sunday faster than he would otherwise? It seems to me in this emergency the primary and important thing is to get

what the Army and Navy need, and the civilians can get along on what is left.

Mr. MAY. We all agree with that.

Senator CONNALLY. You didn't agree with it a minute ago. I want to give the civilian all there is left, but I am not in favor of splitting hairs about estimating the civilian needs.

Mr. MAY. What I have tried to tell you is that the indirect militaries are tied up with the civilian, and when you estimate your direct military, you haven't got nearly all of the picture.

Senator CONNALLY. No, of course not; there is the indirect, too. The main thing is to get this Navy and this Army going and to get what they need and let the rest of the country get what is left; it seems to me that is what we are talking about here. I think we need less figures and more action, myself.

Mr. MAY. We need more action, I agree, but I think you need some figures, too, sir.

Senator CONNALLY. You evidently do, because you have more figures and less results than I have ever seen, I believe, in the same space of time. I think, Mr. Chairman, that these hearings, so far as the publicity is concerned—and I am for the press all right, but I think if we had some executive hearings here, we would do more good and get more information and get more results. When the chairman comes back I am going to take that matter up with him. We are just advertising to the world and to Germany and England, and everybody else, that we are in a mess, and everybody else is wrong, and so forth, and so on. That is all it looks to me like we are doing here.

Mr. FULTON. Do you have any further questions, Senator?

Senator CONNALLY. No, not at the present. If I think of any more, I will ask them when we get to them.

Mr. FULTON. Mr. May, all of that goes to only one side of the picture, the question of demand, and you also have the question of supply. If the question of demand is difficult to answer, isn't the question of supply also difficult?

Mr. MAY. It is difficult, but difficult in varying degrees. Where they all come together, as they do in raw materials, I think you can get reasonable estimates of capacity, though there is always a small margin over which there is some dispute, particularly when you are talking about capacities that haven't been achieved to date but might theoretically be achieved. For instance, when you talk about your capacity for making the metal components of ammunition, let us say, it is almost impossible to get a reasonable figure on it because the facilities for making the metal components of ammunition are your light machining industry of the United States. You could get a tremendous amount of ammunition if you turned over all your light ferrous and nonferrous machining equipment to ammunition production, but the question is, how much of it can you turn over because you need the same equipment for other military production as well as necessary civilian production; so it is very hard to cut your lines.

Mr. FULTON. Then having those difficulties in both demand and supply, it is not necessarily a question wholly of statistical analysis or reasoning. We have had estimates that have been made with the

best intention but have been found to be inaccurate. Is that true?

Mr. MAY. I think that is right, that numbers of them have been found to be inaccurate.

Mr. FULTON. And that being so, there is a growing tendency, is there not, to regard these as not being definite yardsticks that we can rely on with certainty?

Mr. MAY. I would say this. I think that more and more we are getting our materials in shape so that we can make accurate estimates. I think it is fair, though, to say this, that with the best of estimates that are made out of specific bills of materials and multiplied by the number of procurement items, the market seems to demand more for defense than can be justified by that. There is a real difficulty in it. We make allowances for the fact that when you are stepping up production loads very rapidly, you need quite a lot of raw materials in process, and things of that sort; but all along the line there is a certain amount of play, and there are at the present time a number of areas in which the general demand, even under definite preferences, seems to be somewhat larger than you can justify through your analysis of bills of materials.

Mr. FULTON. And then at that stage, of course, there comes the question as to whether you shouldn't determine your needs somewhat in accordance with the supplies that a possible opponent would have available.

Mr. MAY. Yes.

Mr. FULTON. And in that, I was interested in your comparison between our effort as now projected on the 40,000,000,000 basis and the effort of, say, Germany and England, and did I correctly understand you to say that we are proceeding in proportion to our resources at about one-half the ratio that is being devoted to it in England and Germany?

Mr. MAY. I think that is correct, sir.

Senator CONNALLY. Are we proceeding as fast as we can, or not?

Mr. MAY. I think we are not, sir.

Senator CONNALLY. Would you mind telling us just where we are short and what ought to be done? That is what I would like to know. You are estimating in terms of dollars and things, and I would like to get some estimates in terms of munitions and ships and arms and airplanes, and I want you to tell us now, and tell the Army and Navy, just where we are not doing what we could do, if you know.

Mr. MAY. I don't, sir.

Senator CONNALLY. I didn't think you did. Why did you say we are not doing all we can?

Mr. MAY. Because other nations that started with considerably less mechanical equipment, particularly in the heavy durable goods which are the nearest thing to Army procurement that we have in the United States, are managing to convert a considerably larger part of their total resources to defense than we are.

Senator CONNALLY. All right, now we are talking about other countries. We can't run those other countries but we ought to be able to run ours. I want you to tell us where it is that we are not doing all we can to get arms and munitions and ships and naval equipment and airplanes. Those are the things we need. You say we are not doing what we ought to do. Tell us in what respects we are not doing it

and where we can remedy the situation; that is what we want to know.

Mr. MAY. I have to give you only a personal opinion on that, Senator, but the best I have. I think that we have not, in terms of the utilization of facilities, utilized all of the facilities in the United States by any means that could be used on military production.

Senator CONNALLY. All right, what is the O. P. M. doing about that?

Mr. MAY. I think the O. P. M. is making a consistent effort—

Senator CONNALLY (interposing). Are you still making a survey or are you getting down to doing something about it; that is what I want to know. You have been running over a year. What is the O. P. M. doing toward increasing the use of industrial and manufacturing facilities that could be making war supplies?

Mr. MAY. Senator, I haven't jurisdiction over that sort of decision, or real competence.

Senator CONNALLY. You have jurisdiction over saying we are not doing enough. If you are going to say we are not doing enough, you ought to know where we are not doing enough and where the deficiencies are and help us plug up some of these holes.

Mr. MAY. I don't think that quite follows. I think you can say fairly that you think that we can do more in this country than we are doing.

Senator CONNALLY. Do more of what? Tell us. Do more of what?

Mr. MAY. I think we can produce more ordnance items than we are producing at the present. I don't know whether we can produce any more airplanes than we have planned to produce at the present. I think that we possibly can produce more ships than we are producing at present.

Senator CONNALLY. All right, you haven't charge of all the O. P. M., but you have contacts with a good many agencies over there. Is the O. P. M. doing anything to try to tell the Army how it can get more ordnance?

Mr. MAY. I think it is constantly.

Senator CONNALLY. Or telling the Maritime Commission how it can get more ships?

Mr. MAY. I think it is constantly.

Senator CONNALLY. Are these departments responding or are they not?

Mr. MAY. Yes; I think they are responding.

Senator CONNALLY. Then we are doing what we can to speed up and get what you say we are behind on, is that true or not?

Mr. MAY. I think we are speeding up constantly and we are getting consistently a better production record. I believe it can be pushed faster and it must be pushed faster.

Senator CONNALLY. What I want to know, and what I think this committee wants to know, is—and you have touched on it there—if we are not doing all we can do, both the Army and the Navy, we want to know what it is we are not doing and we want to know who is responsible for not doing it. If it is the O. P. M., we want to know it. If it is the Army, we want to know it. If it is the Navy, we want to know it. And if it is the Maritime Commission, we want to know it. All this theorizing about statistics is all very good, but we have got to get down here to brass tacks. You have told us we

are not getting enough ordnance. I think the O. P. M., if it feels we are not getting enough ordnance, ought to call the Secretary of War and Chief of Ordnance in and tell them so, and tell them where they can get the additional ordnance; and if we are not getting enough ships, we ought to call Admiral Land in—I suppose he knows a little about ships or he wouldn't be over there—and tell him, "Admiral, you don't know what you are doing. We know where you can get plenty more ships." If we do, we ought to tell him so.

Mr. MAY. Senator, that isn't the picture, as I see it.

Senator CONNALLY. You said we were shy and weren't doing all we could in ordnance and ships. If you know that, you ought to know why.

Mr. MAY. I would say this, that I think consistently the Secretary of War is sitting down with O. P. M., the Secretary of the Navy is sitting down with O. P. M.

Senator CONNALLY. Maybe they have been doing too much sitting down.

Mr. MAY. And I think they are doing their best to see how they can speed it up. I think that is the constant effort of everybody, and I think to say the effort ought to be increased and pushed as far as possible is a perfectly fair statement.

Senator CONNALLY. Certainly. That is what I am trying to get out of you. You say we are not doing all we could do. If we are not, somebody is to blame, somebody is at fault, and I want to know, if I can find out, who it is, because I have no favorites over there. We will just call them up here and find out about it and tell them where to head in.

Mr. MAY. Senator, what I have tried to say is this, that I think there has been an honest effort to do a job. I think from the beginning, in my opinion—and I excuse nobody, certainly not O. P. M., and certainly not my own outfit, and certainly not the military forces or the country in general—we have not taken the job seriously enough, and I don't think we have aimed high enough, and I think there is a growing recognition of it as evidenced by the fact that the Army and Navy have been coming to you and asking for stepped-up loads and you have been giving them larger appropriations for them, and my guess is that they are going to continue to come to you and ask for stepped-up loads.

I think that the whole program, in terms of the initial procurement efforts, was gone at in too leisurely a fashion, and I think there is a growing inclination and a growing effort to step it up and make it move faster; but I think that effort has to be increased tremendously. I think it is going to mean bigger cuts into our civilian procurement than we have had before.

Senator CONNALLY. That is all right, cut the civilians; they can wait. Let me ask you this. Have you observed that some of this situation has arisen through any friction between the O. P. M. and the Army and Navy, any jealousy or feeling; have you observed anything of that kind?

Mr. MAY. No; I couldn't say that I could charge any of the failure to go ahead to frictions or jealousies. I think there has been on the whole remarkably little.

Mr. FULTON. In line with Senator Connally's question, was the survey or inventory of the machine tools and the small plants that

was taken one that indicated that all of our plants were being utilized to the fullest extent?

Mr. MAY. No; what surveys have been made show there are quite a lot of plants that have not yet been utilized.

Mr. FULTON. Was it partly in that connection that you reached the conclusion expressed to Senator Connally that we could do more by utilizing more of the equipment and machinery that we already have?

Mr. MAY. Yes. I am convinced there is in the United States a tremendous amount of machinery, and equipment, and managerial skill that hasn't yet been really put to work on defense.

Senator CONNALLY. Let me ask you a question right there. All right, that is true. Those are civilian plants, of course, scattered all over the United States.

Mr. MAY. That is right, sir.

Senator CONNALLY. The Army and Navy have no control of them directly. The O. P. M. is the Office of Production Management. Isn't it your particular function to stimulate and to get in touch with and to integrate, at it were, these producing facilities all over the United States into manufacturing things that the Army and the Navy want?

Mr. MAY. You mean the O. P. M.'s function, sir?

Senator CONNALLY. Yes.

Mr. MAY. I think it is.

Senator CONNALLY. What is it doing about it?

Mr. MAY. I think it is doing a great deal about it, but I don't think it is doing enough.

Senator CONNALLY. It is doing a lot of talking about it, but is it doing anything to get results?

Mr. MAY. Yes, I think you have gotten results.

Senator CONNALLY. You say it is not doing enough. Wherein is it not doing enough, and what reports have you made to the heads of the O. P. M., Mr. Knudsen, and Mr. Hillman, as to the defects and the slowness in their operations and how they can be improved, and how we could get better and quicker action out of these industrial facilities all over the United States? Have you done anything like that?

Mr. MAY. We have made many reports, sir.

Senator CONNALLY. Do they ever read them? Do they ever see them?

Mr. MAY. Yes; they see them and they read them. Let me, please, finish the answer. We have made reports showing where we are on the various phases of our program at any particular moment. It isn't our function to frame the policy decisions as to what should be done about it.

Senator CONNALLY. It is your function to suggest, isn't it, to your superiors? You don't control them but you make your reports. Isn't it your function to tell them what you think ought to be done and could be done?

Mr. MAY. I think it is our function to show where we are in the program at any particular time, sir, but we are not productive experts.

Senator CONNALLY. They ought to know that. The O. P. M. are supposed to be production experts.

Mr. MAY. That is right. I am talking about my Bureau.

Senator CONNALLY. If these men at the head of it are not speeding the program up, somebody in the organization ought to have enough "insides" to suggest, very meekly, of course, to the chiefs over there that they ought to do this or they ought to do that, or our program is weak here and we are not functioning 100 percent here. You are subordinates, it is true, but you are paid for your talents and your intellect, and you can't go off and leave it. You ought to take it with you when you talk with these men.

Mr. MAY. I think we have done our best to do that when we could, Senator, but I would say this. Isn't it possible that instead of there being somebody at fault, that everybody is at fault somewhere, and that we have failed in the whole program to see what we ought to do?

Senator CONNALLY. That is the past. We are up to the minute now and I want to know what is wrong now, and not cry because somebody made a mistake a year ago or 6 months ago. We are talking about today. If the O. P. M. is not doing its maximum, and you say it is not, I want to know who is to blame and why doesn't somebody tell them? If you tell us where they are at fault, we will call them over here and we will tell them. I will. I will try to.

I am not trying to be mean, but this is no playboy business, this is serious, earnest stuff, and I am just tired of all this buck passing to other people. Let's find out what it wrong and who is wrong and then put them on the skids, if you can tell us.

Mr. MAY. I can't answer that question; no, sir.

Senator CONNALLY. It looks to me that it is this committee that is on the skids.

Mr. FULTON. If you come to the point that the civilians will just have to be restricted, you have, by reason of priorities that would be instituted, deprived the small businessman of the materials necessary for him to continue his plant in operation, have you not?

Mr. MAY. I wouldn't phrase it in terms of small businessmen, sir. Your priorities will operate to divert from civilian use materials that are needed for military use. Insofar as the people who have these prime contracts or the subcontracts are large concerns, then for that part of their business that is devoted to military production they will get their supplies. Insofar as small people have neither prime nor subcontracts for military, the supplies will be diverted away from them, but I would say it isn't a question of large and small, as such, at all.

Mr. FULTON. It will, of course, be diverted, and taking the situation of a plant which already is not working at capacity, and which has no military defense orders, if you institute these priorities because of the shortages of materials, you do thereby prevent that particular plant from operating.

Mr. MAY. You will prevent any plant from operating to the extent that you ration his materials if he hasn't a priority.

Mr. FULTON. And when you prevent him from operating, you prevent his employees from being employed in that particular plant, and relegate them to the state of trying to find employment in one or more of these military order plants.

Mr. MAY. That is right.

Mr. FULTON. And that being so, you find that the tools which were before only partially utilized are then being utilized not at all in that plant.

Mr. MAY. That will be true, yes; for your over-all production. If it was used for military production, it would get its materials.

Mr. FULTON. That being so, you have a situation where those tools would, under legislation already proposed, become subject to requisition.

Mr. MAY. They would under any circumstances, sir, whether they were being used for civilian use or not, if the legislation went through, would they not?

Mr. FULTON. But the particular tools of that man and his plant which is not being used at all would be the ones that would be requisitioned as against the tools in other plants that would be used, isn't that true, Mr. May?

Mr. MAY. Well, I don't think I am competent to refer to the specific legislation, sir, and just what it entails. I have only read newspaper accounts of it and I haven't read the actual bill itself. But what I tried to say before was that I think it is tremendously important that we should be diverting facilities that are used on civilian production over to military by going to them directly with orders instead of waiting for them to be curtailed because of the operation of priorities on materials. I think it will be better for our economy and our over-all production, and everything else.

Mr. FULTON. And in trying to ascertain some of the reasons why you reach the particular conclusion you do, one would be, as I take it, the dislocation of labor and the dislocation of machine tools.

Mr. MAY. That is right.

Mr. FULTON. By the priorities that would have to be established to the detriment of the businesses, whether large or small, that weren't getting defense orders.

Mr. MAY. To the detriment of the businesses and to the detriment of our over-all production, which I think ought to be as large as we can hold it at any particular time consistent with producing our best on the military program.

Mr. FULTON. And if these people cannot receive defense orders, it would follow that priorities would necessarily, to the extent that they shut off materials, shut those plants up?

Mr. MAY. Oh, of course.

Mr. FULTON. And for that reason, you think it vitally important that we try to see to it that plants that have existing facilities that could be used on defense orders should be given that type of orders?

Mr. MAY. That is right. I think it is vitally important that the diversion of facilities should be pushed as fast as possible, and that all reasonable attempts should be made to keep that diversion ahead of the operation of material priorities insofar as possible.

Mr. FULTON. And with respect to your function, it has been that of gathering and analyzing statistics rather than that of issuing orders on behalf of O. P. M. or the Army and Navy as to how it should be done?

Mr. MAY. We have never issued orders, any orders, on behalf of the O. P. M. or the Army or Navy, sir, and it isn't our function, but it is our function to try to keep books as well as we possibly can on the

whole transaction in terms of where we are at a particular moment, and to keep the people in O. P. M. and in the Army and Navy informed; and second, to give them the information that they ask us for that is relevant to their policy decisions.

Mr. FULTON. And then when that is done, it is up to someone else to follow it or not as they see fit in accordance with their considered judgment?

Mr. MAY. That is right.

Mr. FULTON. In connection with your function of gathering statistics, have you been able to get statistics from the Army and the Navy with respect to the activities of Germany and of the other countries in the occupied portion of Europe? That is, do you know whether new plants are being built and do you know whether they are able to operate plants taken over in occupied territories, and do you have the benefit of that when you are making up your statistical analyses as to what we will probably need?

Mr. MAY. I think, if you don't mind, sir, I would rather not answer that particular question directly in terms of just exactly how much information we have about what is being done in Germany.

Mr. FULTON. There is no question asked as to specific facts. The question is the general one, Do you know what is being done in Germany?

Mr. MAY. I think it would be better if I answered that one off the record, and I would be delighted to give you for the committee's information, if you like, a general statement of what information we have about it.

Mr. FULTON. The committee could consider that at a later time, I think.

Acting Chairman WALLGREN. I understand a little while ago when Senator Mead was questioning you, you said you didn't think there would be any shortage of oil as far as the source of supply was concerned, but it was a question of transportation?

Mr. MAY. Yes; that is my general understanding of it, sir.

Acting Chairman WALLGREN. That is, there might be shortages of lumber and other materials, too, because of that same reason of transportation. We have the available materials here in this country. It is a question of getting them to the people and to the factories.

Mr. MAY. That is correct, sir.

Acting Chairman WALLGREN. I would like to ask Mr. Nathan a question. I would like to have you qualify yourself, Mr. Nathan, as to what your position is and what you have been doing down in this Department.

Mr. NATHAN. In the O. P. M. and in the Advisory Commission to the Council of National Defense, I have had charge of requirement and capacity studies, coordinating what our military and civilian needs are with our ability to produce.

Acting Chairman WALLGREN. And you study all available minerals and materials in this country?

Mr. NATHAN. That is right.

Acting Chairman WALLGREN. How about South America?

Mr. NATHAN. We study the foreign sources of supplies in terms of their production figures and their export and import figures.

Acting Chairman WALLGREN. In your studies have you ever run

into a situation where Germany has bottled up certain strategic materials?

Mr. NATHAN. No; we haven't. It has been largely, I would say, confined to the available statistical information rather than any studies of control.

Acting Chairman WALLGREN. Have you run into a situation where Germany is obtaining certain strategic minerals in South America?

Mr. NATHAN. Quite a bit of exports from South America go to Germany.

Acting Chairman WALLGREN. As I recall the testimony before a certain committee here in the Senate, it was testified there by someone that Germany had tied up a certain amount of material or minerals that were quite important to this country. I am wondering if it isn't possible that we might fight fire with fire and tie up something they might need.

Mr. NATHAN. Of course, today we are in process of tying up in the sense of placing contracts, in the sense of buying—we are buying tremendously increased quantities of these materials from South America relative to what we ever did before. Copper and kapok are good illustrations. We are buying substantial quantities of raw materials down there.

Acting Chairman WALLGREN. Do you know whether or not Germany is getting copper out of South America?

Mr. NATHAN. Frankly, I don't know, offhand.

Acting Chairman WALLGREN. Could you check and find out just what materials Germany is getting out of South America?

Mr. NATHAN. Definitely. I will prepare a statement on everything we can possibly get on what exports are going to Germany from South America of various products.

Acting Chairman WALLGREN. It may be possible, Mr. Nathan, that we will call you later.

I think we have gone long enough today. If there is anything you care to add, you may submit it to the committee. Thank you, Mr. May and Mr. Nathan.

We are going to adjourn until tomorrow at 10:30. The Secretary of the Navy will be the witness. We expect to meet in this room tomorrow at 10:30.

(Whereupon, at 12:50 p. m., the hearing was recessed until 10:30 a. m. on Thursday, June 5, 1941.)

INVESTIGATION OF NATIONAL DEFENSE PROGRAM

THURSDAY, JUNE 5, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING
THE NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:40 a. m., pursuant to adjournment on Wednesday, June 4, 1941, in the Caucus Room, Senate Office Building, Senator Harry S. Truman presiding.

Present: Senators Harry S. Truman, chairman; Joseph H. Ball; Tom Connally; and James M. Mead.

Present also: Hugh A. Fulton, chief counsel; Charles P. Clark, associate chief counsel.

The CHAIRMAN. The committee will come to order, please. Mr. Nelson will be the first witness. Mr. Knox is delayed.

Will you be sworn, Mr. Nelson, please? Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

Mr. NELSON. I do, sir.

The CHAIRMAN. Just be seated there, Mr. Nelson.

TESTIMONY OF DONALD M. NELSON, DIRECTOR OF PURCHASES, OFFICE OF PRODUCTION MANAGEMENT

The CHAIRMAN. Will you please give to the reporter for the record your name and official connections with the defense set-up?

Mr. NELSON. My name, sir, is Donald M. Nelson. I am Director of Purchases under the Office of Production Management.

The CHAIRMAN. Mr. Nelson, this committee would like to have an informal report from you on just what progress you have made, and any other information that is of importance to this committee for the benefit of the Senate and the Congress.

Mr. NELSON. All right, I will be glad to do it, sir. I didn't prepare a statement.

The CHAIRMAN. That is all right. We would rather have it that way.

OBJECTIVES AND ACTIVITIES OF DIVISION OF PURCHASES OF O. P. M.

Mr. NELSON. I would just like to talk to you purely informally on what we are doing.

I conceive the job of Director of Purchases to have three main objectives. No. 1: To help the Army to get what it wants when

it wants it. It seems to me that that is No. 1, that always it must be No. 1.

The CHAIRMAN. And the Navy, too.

Mr. NELSON. I should have said the armed services; I beg your pardon.

No. 2: To help get that at as low a cost, consistent with the speed of delivery, the quality of things we are buying, at a reasonable profit for all concerned.

No. 3—and I consider this, sir, very important in the field of activity which I have undertaken to do—is to help in every way possible to merge this defense program, this arming of our country for defense, with the civilian economy, so that it impinges as little as possible on the civilian economy, also consistent with objective No. 1, getting what we want when we want it. In other words, I believe that if by using our brains we can bring about a merging of this thing with the civilian economy, so that the public does not have to make sacrifices until they are needed, when they are needed the public will then make them gracefully and gladly and willingly.

Those, sir, are the three objectives which we have had in this program.

We don't do any actual buying ourselves. The buying is done by the procurement officers of the Army and the Navy. Our job is to assist them in every way we possibly can, in an advisory capacity. When asked by them, we help them in making their purchases, and we have assembled together, sir, I think, one of the greatest organizations of purchasing agents that has ever been assembled in this country to help the services in this job.

I would like to go into just a little more detail on some of the ways in which we have tackled this problem, sir.

The CHAIRMAN. Proceed.

Mr. NELSON. First, we have helped get an increase in the number of suppliers of an item. We have helped by persuading manufacturers to participate in the defense program. When this started, there were very few manufacturers in the country who knew how to sell to the Army and the Navy. We have endeavored to explain the methods of selling. We have endeavored to get manufacturers who were not particularly interested at that time in the defense program, interested. Today of course that interest is very keen and that part of our program is not so important at the present time. When we started, sir, a year ago that was a very important part of our program, to get more bidders, in other words.

The CHAIRMAN. What effort has been made by your part of the national-defense set-up to see that the small businessman and the small manufacturer comes in for a part of this tremendous expenditure?

Mr. NELSON. Well, sir, I have conceived that as one of my main jobs. I may just recite to you a few things that we have done to accomplish that. First, when we first came into this picture most of our defense matériel was bought f. o. b. Army depot or Navy depot. For example most of the quartermaster clothing items were bought f. o. b. Philadelphia depot. But they are used all over the country and it took very little effort to persuade the armed services that in most cases they would be as well or better off by having it f. o. b.

plant instead of f. o. b. depot, which enabled many manufacturers, small manufacturers particularly through the Midwest, to participate in this program, and they would never have had a chance if it were f. o. b. depot.

The next thing we did was to advise the Army, and they readily agreed to it—I refer to the Army in this case because theirs were much larger purchases of things that smaller manufacturers could immediately make—to limit the amount of the award that would go to any one concern. I could give any number of examples of that. Shoes, for example, we limited to 15 percent of the total bid to any one manufacturer. That enabled us to let the smaller manufacturer have a chance to go into this program.

I could go on citing you many examples of that kind, because as Coordinator of National Defense Purchases, before I went into the Office of Production Management I was charged with the job of Director of Small Business Activity. It was really the start of what is now called the Defense Contract Service, and it was formed primarily, sir, to help the smaller manufacturer find a way to get into this picture, if not by a prime contract, then by a subcontract—and in most cases he can't get a prime contract because he hasn't the financial ability nor the engineering talent to handle a prime contract, but he can take part of it as a subcontract.

I could go on and give you any number of instances of that kind where we have helped. I think one of the principal things we have done to help the smaller manufacturer get into this business is to reduce the amount that the Army would buy from one person. For example, I remember in Texas, Mr. Senator, the Giliam Soap Co. wrote me and said they wanted to get into the soap business of the Army but the award was for something like half a million pounds and they weren't capable of handling more than 100,000 pounds at one time. The Army very gladly enabled us to split up that award so that that soap company down there could have a chance to bid on a part of the business since they couldn't take the whole lot; and that has been done in innumerable instances.

SENATOR CONNALLY. I think that has worked both ways, though. I think that has probably worked in reverse. For instance, my State doesn't make any tanks, and steel fabrications, and manufactured steel. It is not an industrial State. We have a lot of industry. But we can make some things down there. We can make cheaper mattresses and better mattresses than anybody else.

MR. NELSON. Yes, sir.

SENATOR CONNALLY. So we ought to be allowed to make the few little things that we can make. But there is a manufacturing concern down there that makes mattresses and it has been making a lot for the Army, so they had the letting of bids the other day over at Philadelphia, and this manufacturer bid the cheapest bid on 169,000 mattresses, but they wouldn't let him have but 50,000. They said, "Oh, you have got to scatter that around." The bidding people, the National Bidding Association, I think, has its headquarters in Chicago, and they raised a row with the O. P. M. or the War Department, or somebody, and said, "Here, we want some of these mattresses. Even though they cost the Government a little more than we can get them for down in Texas, and maybe they are not as

good, but we have got to have some of them." And so they issued an order that he could only have 50,000 in that letting, although he bid the cheapest on 169,000 mattresses. What do you say about that?

Mr. NELSON. Mr. Senator, I am fully familiar, not with this last instance, but I am fully familiar with your company in Texas that makes a very good mattress right in the cotton section and does an excellent job, but the freight rates on mattresses are pretty high.

Senator CONNALLY. There isn't as much freight to the Army camp at Brownwood, Tex., or Aberdeen, Tex., and all around there, as when they come to Chicago and are shipped back.

Mr. NELSON. That is right, and if they are to be shipped back, it would be definitely wrong.

Senator CONNALLY. I suppose you mark each one of the mattresses when you make it as to where it is going to go.

Mr. NELSON. No, sir; but you know to which depot it is going to go. These things must be concentrated in certain depots. One of the things we have tried to do in spreading the work is not to waste the Government's money. I can't tell you that in every case we haven't worked hardship on somebody. I think that is right, and very definitely true. But, on the other hand, let me show you the principle of the thing.

Senator CONNALLY. If you are not going to let the cheapest bidder have them, what are you going to have any bids for at all?

Mr. NELSON. Mr. Senator, perhaps I am definitely wrong in my thinking that the thing we want to do in this defense program, insofar as it is possible, without interfering with the speed of the defense program, is to help spread this business all over the country so that everybody will have a piece of it wherever he can, so as to help the economy as a whole.

Senator CONNALLY. Most of it you can't spread. How are you going to spread the steel business with Mr. Stettinius sitting over there running the O. P. M.?

Mr. NELSON. I think that is very unfair, sir. Mr. Stettinius has nothing to do with the spreading of the steel business.

Senator CONNALLY. Well, what is he in there for if he is not an expert on steel? ¹ I don't mean to reflect on Mr. Stettinius, but you know good and well—

Mr. NELSON (interposing). He is there as Director of Priorities, and just as I am here, I think Mr. Stettinius is here to help the defense program, and if I didn't think I could help I would want to be back home, and I am sure that is his position.

Senator CONNALLY. I appreciate that and I am sure you are doing a good job, but I think we ought to be able to interrogate you and find out what you are doing without there being offense taken.

Mr. NELSON. I am glad to be interrogated.

Senator CONNALLY. I ask you how you can spread the business. Take the steel business. Forget all about Mr. Stettinius. How are you going to spread the steel business all over the United States?

Mr. NELSON. You can't, sir, of course.

¹ Edward R. Stettinius, Jr., formerly chairman of the board, United States Steel Corporation.

Senator CONNALLY. Now the things that people can make, and are making now, making better than anybody else—when you can't give them some more of this business, oughtn't they to be allowed to go ahead and make them without your taking it away from them?

Mr. NELSON. I think that is true, sir, and it has been one of the things that I think has guided us. I think I could sit down with you and show you innumerable examples. Take some of the pants manufacturers in Texas who never would have gotten any pants business if we had not adopted the principle of not allowing them to go into one place; we bought them at a higher price because we thought the manufacturer in Texas should have some of the pants business, and we thought that for this reason, sir. I feel that some day we are going to make an all-out effort in this country, and the more people are educated to make products that the Government wants, the better able you are going to be to get into all-out.

The CHAIRMAN. How long are we going to wait to make that all-out effort? That is what is worrying some of us.

Mr. NELSON. Well, sir, that is worrying me, too.

The CHAIRMAN. Don't you think it is about time we either made an all-out effort or quit one?

Mr. NELSON. Well, sir, I think it is about time that this country began to appreciate the danger it really is in so an all-out defense effort would be possible, and I, for one, am on record everywhere that I think an all-out effort should be made and that this country should be put into high gear with all the available facilities we can get ready.

The CHAIRMAN. I was in Philadelphia last night, and this morning I noticed an interview in the Philadelphia Record by a gentleman who is in charge of some of the defense program up there, in which he said that there were at least 40 percent of the machines in little shops in the Philadelphia area that had never been even put to work; and that is true all over the country. How long are we going to sit around and keep those machines idle? I was told by a competent engineer yesterday who is supposed to know what he is talking about, that the country hadn't started a 40-percent effort, let alone 100-percent effort. If that is true, it is about time somebody was waking up.

Mr. NELSON. If you want my opinion on how you are going to get the all-out defense effort, you are going to get it by increasing the size of the appropriations, increasing the whole vision of the country as to what is necessary in matériel and resources put into this business, putting the load on industry so that we will get all of that.

The CHAIRMAN. I don't see any reason for increasing the size of the appropriations when we were informed yesterday that unless we increase the effort by 50 percent for the last 6 months of last year, we can't come anywhere near equaling what the program outlined in the first place is supposed to be. Why increase the appropriations when you can't spend it? And the reason you can't spend it is because you are not putting the whole effort of the country to work.

Mr. NELSON. I believe you can spend it, sir.

The CHAIRMAN. All right, let's do it; let's put these people to work and let's distribute this thing so the little fellow will get his share.

Mr. NELSON. I am for that 100 percent.

The CHAIRMAN. All right, proceed with your statement.

Mr. NELSON. My whole statement is shot to pieces now.

The CHAIRMAN. Start over and we will try to shoot at it again.

Mr. NELSON. Another thing that we have attempted to do in the Division of Purchases was to modify specifications with the Army's consent, to permit quicker delivery of acceptable merchandise and to enable manufacturers who didn't have certain kinds of machinery necessary to participate. Naturally, in peacetime your specifications become very rigid. We have asked the Army and Navy—and they have agreed in nearly every instance, because we wouldn't ask them to do anything we wouldn't think was acceptable—to change specifications so as to get quicker delivery and bring more manufacturers into the picture. We have attempted to obtain speed in delivery and lower prices by assisting the Army in negotiating contracts instead of advertising for bids in certain instances where the advertising for bids would bring about a slower delivery.

We have assisted, with the willing help of Congress, in establishing a stockpile of goods that would impinge particularly on the civilian trade. The Army asked for \$175,000,000 so that these purchases could be made, taking advantage of seasonal lulls in industry, taking advantage of times of marketing of wool and other things in order that the mills might make up these goods during their dull periods, by rearranging delivery dates to fit economical production.

I could go on, sir, and just give you any number of instances, but I am sure that they probably would bore you. I have a whole list of things that we have done but they fit into this category.

The CHAIRMAN. You won't bore this committee. We are after information and if you have information of interest to this committee and the general welfare of this country, we want it in the record. It is pretty hard to bore this committee. It has been remarked here that it has been tried by experts and has been a failure so far.

Mr. NELSON. We have attempted in this spreading of the work around over the country to spread employment and prevent, insofar as possible, the migration of workers. We have done that through the seasonal timing of the purchases, through distribution among many firms, and through the geographical distribution of business in accordance with unemployment, again all of this to be done so as not to interfere with the speed of delivery. I think one of the worst things that could happen to us, if we built a tremendous, big defense program—which we must do—would be if in doing it, we created economic deserts over the United States by causing an unnecessary migration of workers. As the Senator from Texas has said, there are many places where we can't prevent it, but in every place where we can prevent it, I feel it is our duty, and I feel we have accomplished a great deal in that general direction.

So much for the Division of Purchases. I am also chairman of the Plant Site Committee of O. P. M. The Plant Site Committee of O. P. M. was set up to help insofar as it was possible to see that

plants built with Government money were put into places where they would relieve unemployment loads, to prevent undue concentrations in industrial centers of the country; and I believe, sir, that we have been successful, without hurting at all the speed of the effort, the quality of the effort, in getting plants located in spots in the country where they can do the most good, not alone now, but after the program is all over. I think that insofar as it is humanly possible, we should plan this program so that when it is over, we will leave a better country and not a poorer country.

The CHAIRMAN. Is there information available so it could be presented to this committee to show just where the locations of these new plants are, and how many of them are in different areas in the various parts of the country?

Mr. NELSON. Yes, sir; we can get that for you.

The CHAIRMAN. I would like to have that in shape so we can see what it looks like; in fact, I would like to have it on a map of the United States, showing just exactly where these plants are located, their value, and the number in each State or each section of the country. We will take the eastern seaboard, the center, east of the Mississippi, and that part west of the Mississippi and to the Rocky Mountains, and the western seaboard.

I had the privilege of looking at a map down in one of the O. P. M. offices not long ago and they had tacks stuck into these places, and there were so many tacks around the city of Philadelphia they had to go half way across the Atlantic Ocean to get them all in. I would like to know what that situation really is.

Mr. NELSON. I would be glad to get it for you. Around Philadelphia, as you know, we can only build ships on the water.

The CHAIRMAN. And yet this fellow says 40 percent of the shops in Philadelphia are still idle. I don't understand that, from the looks of that map. But proceed. I interrupted you again. We are very much interested in this plant site situation. I think that has as much bearing on the welfare of the country now and in the future as the situation that Senator Connally was talking about.

Mr. NELSON. I do, too, sir. If I may, I will read to you the statement of policy which was adopted, first by the Defense Commission and then later by O. P. M., and these are the principles upon which we are trying to do this. It reads:

Experience gained during the past 10 months would indicate that the immediate ends of national defense are largely consistent with the longer run objective of a better balanced industrial economy. To reach these objectives it has become apparent that the following principles must govern the location of new industrial facilities:

1. That sites be avoided in cities or regions where defense orders are absorbing or are likely to absorb the available labor supply, or to congest housing, transport, or other facilities.

2. That every possible preference be given to locations where large reserves of unemployed or poorly employed people are available and where industrialization during the defense period will contribute to a better long-run balance between industry and agriculture. These conditions are particularly acute in many areas of the South and West.

3. That where facilities must be located in the present industrial areas, special attention be given to regions which have suffered a decline in their peacetime industries or to cities which have not been heavily engaged in defense production.

4. That the proper location of new plants, the wider distribution of defense contracts, and an aggressive policy to promote the subcontracting of the larger

defense orders held by private contractors, all be considered essential parts of a well-rounded program to obtain larger use of the human and material resources of the country in the defense effort.

Those, sir, are the fundamental principles that we are trying to follow in that plant site committee.

The CHAIRMAN. If those fundamental principles are actually carried out on that basis, I don't think anybody would have any kick, but I am not inclined to think that they have been carried out on that basis, and I want to be shown whether they have been or not. I am from Missouri!

Mr. NELSON. I am from Missouri, too, sir.

The CHAIRMAN. Good! Then we understand each other.

Mr. NELSON. There are many reasons why this can't be done in every case. That is the objective and I can assure you, sir, that I believe in those fundamental principles as sincerely as anybody I know. I have seen this situation, particularly in the Middle West, where young men are educated—I went to the University of Missouri and I know that situation—where men are educated and then because there is no industrial development or because it has moved, they operate pumps in a filling station because there is nothing better for them to do; or at a time like this, they migrate out of their State into other places.

The CHAIRMAN. All that section has lost population in the last 10 years for that very reason, and our young men are still migrating, and I would like for that situation to be stopped. In fact, it would be better for the country if we could put a few more of these defense plants where they can't be reached from the two oceans.

Mr. NELSON. I can assure you every effort I can put into it will be in that direction, because I believe in it implicitly, and in every case it isn't done, we have to be shown, because we are from Missouri, why it can't be done. After all, the first and primary thing is to get what we want quickly. If we want airplanes and we want them quickly, we must go to managements that know how to make airplanes, and tremendous expansion was incurred, as you know, on the west coast and on the east coast, in areas that certainly are anything but strategic.

But then immediately following that plants were put in the Middle West—Kansas City, Omaha, Tulsa, Fort Worth, Dallas—with the idea that later on, after we had built what we wanted, those plants would be in a position to carry on, and in case there was bombing or anything of that sort, these plants located in the Middle West would be able to give us the airplanes that we needed.

I believe that that was the logical solution of the problem, but still that created tremendous migrations, all necessary in the national-defense program to get these airplanes quickly, to go to managements and skills that knew how to do it; and, sir, in every case where these plants are not located today in these areas as defined by those fundamental principles, there must be some impelling reason, such as speed of getting what we want, when we want it. I know that all of them are fine cases of judgment. Sometimes we make mistakes, of course we do. We will make a lot more of them. But it isn't because we don't believe fundamentally in those principles.

The CHAIRMAN. I hope you carry out that fundamental principle. Of course, speed is the essence. We want deliveries.

Mr. NELSON. That is right, sir.

Senator CONNALLY. Would it interrupt you if I asked you a question?

Mr. NELSON. No; I am all through.

Senator CONNALLY. I don't want to break up your statement.

Mr. NELSON. I am all through, sir.

Senator CONNALLY. I was charged with messing it up a while ago and I don't want to do that.

The CHAIRMAN. Let me say to the members of this committee, all witnesses understand whenever the members of the committee want to ask any questions, no matter whose train of thought it may break, they are at liberty to ask them as far as the Chair is concerned.

Senator CONNALLY. I don't want to break up any thought; I am trying to generate a little—in my own mind, I mean—Mr. Nelson.

Mr. NELSON. I can have some generated in my own, too, sir.

Senator CONNALLY. Of course, you just said speeding up production is what you are trying to do, and we all want to do that.

Mr. NELSON. Yes, sir.

Senator CONNALLY. What, if anything, has the O. P. M. done, or is it doing now, toward either inducing or putting clauses in their contracts to compel or coerce the doubling of shifts in these factories that are already equipped and making stuff? Why shouldn't those factories work all night and all day, too?

Mr. NELSON. I think they should, sir, and I think, while that is purely my opinion, that Mr. Knudsen and Mr. Biggers share that opinion. We have discussed it many times with Mr. Hillman. We must have—

Senator CONNALLY (interposing). Mr. Hillman is not concerned with increasing the labor supply very much, is he?

Mr. NELSON. Yes; he is, sir. He has under his general charge the training program, which I think has been a very constructive thing in increasing the labor supply of this country.

Senator CONNALLY. I hope so. I won't interrupt you.

Mr. NELSON. There are two factors that I believe are necessary to really speed up this program. No. 1 is to set forward the time schedules. Now, after all, I said in No. 1 that we try to get the Army what they want when they want it. They set the time schedules when they want this thing completed. I believe No. 1 of this program is to have this whole time schedule set forward and contracts renegotiated, sir, on two fundamental principles: No. 1, to have three or four shifts wherever possible; and No. 2, to get more subcontracting to fill up these small machines; and No. 3, I think the total load has to be increased so that we project this program into what we are going to need 18 months from now, and not just follow each successive calamity and increase it as each one comes along. I want to see us project our whole thinking into what this country is going to have to do 18 months from now, whether it builds additional steel capacity, additional aluminum capacity, additional capacity of any kind to help take care of both civilian and the military needs of this country, and project it as far ahead as we possibly can in our thinking. O. P. M., I believe you will find, is doing everything that it can to try to bring that program about.

Senator CONNALLY. I agree with your thought there, but on the other hand, here is a big concern and the War Department and the O. P. M. give them a big contract, and about 2 months later they need some more and they give them another contract. That concern, as long as it has the contract and knows it is ultimately going to get the business, is not necessarily under any great pressure to add another shift.

Mr. NELSON. I think you are right, sir; I agree 100 percent with what you say.

Senator CONNALLY. As long as they can look down the road and see orders coming in, the longer it takes, if they are going to consult their selfishness, and their selfishness might slip up on them and influence them without their knowing it, they are not in any hurry to put on extra men and work all night, but the Government is.

Mr. NELSON. Yes, sir.

Senator CONNALLY. And it seems to me your organization is the Office of Production Management—production management. It seems to me that one of your biggest functions and the greatest service that you can render to this Government and people is to devise some way of getting these plants to put on extra shifts and work all night, because you gentlemen know more about industry than we do; you are in business and that is why you are over there. That is what other countries have had to do during this war.

Mr. NELSON. That is right, sir.

Senator CONNALLY. And then tie into that some survey or something of these subcontractors that can do this work, and put the heat on these big contractors to let out every piece of work that they can let out to subcontractors, and thereby relieve the load on themselves. Just like a good Senator, he doesn't do anything, or ought not to do anything that he can get a clerk or some subordinate to do for him. The President of the United States once said—I don't know whether it was Mr. Coolidge or Mr. Hoover, but somebody said—that the President of the United States ought not to be called on to do anything that he can have a subordinate do for him. So that rule, I think, would apply to these big contractors.

Mr. NELSON. I think, sir, it is fundamentally sound. I think you will accomplish that, as I say, in two ways: (1) By advancing the schedule. Certainly you are not going to persuade any manufacturer to incur extra expense if he can meet the schedule that he has been given by just going along with one shift.

Senator CONNALLY. I agree with you. I think you ought to wake the Army up. If their date for delivery is not soon enough, move it up on them. Wake them up on it. They probably have some of this industrial drift along in their system—career men, professionals. I think you ought to move up these dates wherever you possibly can. I am agreeing with you. What you called the delivery dates ought to be moved up.

Mr. NELSON. Yes, sir; and in that way you will get more shifts. In case extra expense is incurred, we ought to pay it. Contracts should be renegotiated wherever necessary in order that we can bring those things about.

The CHAIRMAN. If that is not done, you are going to be worse than 50 percent behind when the end of the year comes, according to the

statistician who told us yesterday that we would be lucky if we got the rest of our 17 billion spent this year.

Senator CONNALLY. Mr. Nelson, may I ask one other question? The only way you are going to be able to enforce that, though, moving up these dates, is to make that one of the conditions of their contract, and move it up enough so that in order to fill those delivery dates, they will have to subcontract and they will have to put on another shift.

Mr. NELSON. You are right, sir.

Senator CONNALLY. And if they don't do that, they won't get the business.

Mr. NELSON. You are right, sir. I said we would have to renegotiate the contract.

Senator CONNALLY. That is all right if they will do it. I don't know whether they will do it or not.

Mr. NELSON. They will do it.

Senator CONNALLY. But we ought to "re" something to get the contractors in a position where they have to do it. They are not going to do it voluntarily, many of them; they are not going to put on extra shifts in order to speed up the time limit when under the law they don't have to do it. Do these contracts have penalty clauses?

Mr. NELSON. Yes, sir; practically every one of them has a penalty clause.

The CHAIRMAN. Have they bonus clauses?

Mr. NELSON. Some of them.

Senator CONNALLY. I was just going to ask that. Couldn't you put a reverse clause in there, that if they delivered them early they would get a little more profit?

The CHAIRMAN. That seems to have been a successful policy with the Maritime Commission.

Mr. NELSON. I thoroughly agree with everything you have said, sir, and we are working toward that with everything we have got. I think you will see that started within a very short time.

Senator CONNALLY. You are not going to make these fellows do it with a feather duster. You have to put a little pressure in the contracts, and if the O. P. M. comes out with a definite, clear-cut policy and impresses it on the Navy and impresses it on the Army, I think we will get somewhere, and I think that is the biggest thing right now. There is a feeling over this country—maybe it is not justified, but there is a feeling over this country—that we are in a slump as to production; that we are just sort of plodding along and the mud is pretty heavy and we are not getting anywhere. That may not be true. But if we could reverse that feeling and the country could feel we were getting ahead and we were producing, it would have more effect on the morale of the people than a lot of fine speeches.

Mr. NELSON. Mr. Senator, I think that is the most important single thing we can do at the present time, in my opinion.

Senator CONNALLY. I think so, and I think that is the function of you folks over there. That is what we have you down here for, to tell these folks like the Army and the Navy that are just drifting along and doing it the same old way that General Grant did, that we want you to bring into this military and naval program the modern efficiency of American business and American production, and devise these policies and these contracts so that we will get results.

I believe you are trying to do it. I want to compliment you. You were before the Finance Committee, as I recall it, last year. I think your attitude is fine, and any sharp remarks or interrogations that I have made have been with the desire to sort of whet you up to your best.

MR. NELSON. I appreciate that, Mr. Senator; no hard feelings at all.

THE CHAIRMAN. Senator Mead, do you have any questions? Senator Ball?

SENATOR BALL. Mr. Nelson, it seems to me you have done a good job of spreading this procurement of supplies and equipment which, I understand, is chiefly your field—

MR. NELSON (interposing). That is right, sir.

SENATOR BALL. To the smaller concerns by splitting up the orders. I am wondering if you couldn't do somewhat the same thing on the subcontract problem. I know I have heard it said that these prime contractors that get a large Army order for some piece of ordnance, for instance, are reluctant to subcontract it because they are just a little afraid when the part comes back from the subcontractor, it won't fit just right, and they are up against the gun, and they are held responsible by these heavy penalty clauses if they don't finish in time. Would it be possible for the Army and the Navy themselves to break up these prime contracts and to do the subtracting?

MR. NELSON. No, Mr. Senator, in my opinion that isn't feasible, nor is it possible, because somebody has got to be responsible for the assembly, and in that case it would make the Army or the Navy the manufacturer. I believe it can be accomplished in the very way that Senator Connally said, by moving up the delivery date and increasing the load, and subcontracting will follow as a matter of course because it will have to be done in order to meet those increased and speeded-up delivery dates.

Some one person with managerial ability has to be responsible for getting a group of subcontractors working together in unison to produce on scheduled time parts to exact measurement. Most of these things that subcontracting is good for are precision work, very highly skilled work, and it needs managerial ability to show that manufacturer how he may do it, to help teach him to fit into the whole problem. He will do it. I believe there is a lot of latent ability that isn't being used at all in the small manufacturers all over the country, if they are once shown how to get into the picture and how to help in the program. They are patriotic, they are eager and anxious to do it and, in my opinion, the solution is the very thing Senator Connally talked about, increasing the speed of production required by the armed services, and increasing the amount of the load, and it will naturally force these larger manufacturers with the managerial ability, with the engineering organizations, with inspection organizations, to seek out these smaller manufacturers and help bring them into the program.

I am sure it can be done. It has been done successfully in places. England went through this same experience and finally had to come, in the airplane industry, to the alternative of requiring in the contract that 30 or 35 percent of that contract be subcontracted. If that is the only way to do it in this country, I would be in favor of going that far in order to bring this thing about which I know has to be brought about so that all of the latent production ability of the country can be brought into this picture.

Senator BALL. I agree it has to be done, but under that procedure, aren't you still going to leave the prime contractor up against the gun on this penalty proposition if one of the subcontractors falls down on it?

Mr. NELSON. Somebody has to be responsible.

Senator BALL. Some of the airplane people have told me that is one reason they are afraid; they haven't the trained subcontractors to make these parts and they have just been scared to let the "sub" because they would be left holding the bag.

Mr. NELSON. You see, sir, somebody has to be held responsible for the quality of the thing you are buying. A machine gun must work and work efficiently, it must be able to do the job, and somebody has to be held responsible for that quality.

Senator BALL. Could the Army hold the subcontractor responsible directly?

Mr. NELSON. They then would be the manufacturer, sir, in my opinion.

Mr. FULTON. Along the line of Senator Ball's questions, hasn't a great deal been done by one of the divisions of the Army, the Chemical Warfare Service, rather successfully in dividing up the objects into a number of parts and making separate contracts, even though it does mean that they do have to take the responsibility?

Mr. NELSON. That is right, sir, they have done it, but in that case they haven't had the high precision in many cases where it has been done. They place an order for the assembly of parts, and they fit into a whole. If you break down a machine gun, these things must be made to very high tolerances.

Mr. FULTON. That is a matter of inspection.

Mr. NELSON. It is a matter of inspection, of education, of training, of readapting of equipment, of engineering. It is the engineering skill. That is what makes management skill that you buy when you are buying this thing.

Mr. FULTON. But can't the inspection still be done by the prime contractor even though the subcontractor has a direct responsibility for the article?

Mr. NELSON. Yes, sir; but again each of these parts must come in at the same time in order that they may go through on assembly. That is what mass production is. I think it can be done. I think it must be done. My answer is the very thing Senator Connally was talking about: increasing the requirements of the load, and naturally it will force it out.

Mr. FULTON. That would be a help, but it isn't necessarily a 100-percent answer.

Mr. NELSON. No, sir; I don't believe it is a 100-percent answer.

Mr. FULTON. And Senator Ball's proposition involves more administrative work, but it is at least possible and it has been done with some items, and done very successfully, has it not?

Mr. NELSON. Yes, sir; it has with some items.

Mr. FULTON. And, as a matter of fact, I noted in the Chemical Warfare report that they had actually made their articles at less expense than the original estimates, which is rather unusual in the defense program. I think it was only somewhere around 80 percent of the estimated cost, so it has not only been successful, but it has been cheaper than was anticipated.

Senator BALL. Isn't that what we are going to do in bomber assembly plants? Isn't the Army contracting direct for those parts and then supplying them to the assembler?

Mr. NELSON. No, sir; only for some of the parts. Some one company runs each of the plants, and they will be responsible for the final quality of this airplane that comes out, and they will be responsible for the proper scheduling of the parts that are bought in most cases.

Senator BALL. But the Army contracts for some of the parts and undertakes the responsibility of delivering them on time.

Mr. NELSON. For some of the parts; yes, sir.

Senator BALL. I wondered if that might be another thing that could be done.

Mr. NELSON. Perhaps something could be done along that line. I don't believe that generally is the answer, and I believe if you will talk to most production people, people who have had experience in production, they will tell you the answer lies rather in the other direction than in the direction of the Army's being responsible for the assembly of all these intricate mechanisms, all of which must function perfectly in order that it be a performing piece of equipment.

Senator CONNALLY. I would like to ask you a question in the form of my own statement. It seems to me that what we need in this whole program, the first thing, is to have one man to run this O. P. M.; let him be a production boss, as it were, with wide powers over all these plants, subcontractors and everybody else, give him very wide powers, and if he can't get the stuff voluntarily, he can commandeer it, if need be. It seems to me that we have got to unify this whole program and have one production boss, or whatever you want to call him. I think there is too much lost motion, too much play between the Army and the Navy and the O. P. M. It is just like chasing a rat around, he runs under one place and you get him out of there and he goes somewhere else. I think we ought to have a production chief and give him very wide powers and let him prorate this work around among these subcontractors and these big contractors and give them these preferential deliveries that you suggest, and get this thing to going.

The CHAIRMAN. Isn't that production boss the President of the United States? He has that power now.

Senator CONNALLY. The President can't do it himself.

The CHAIRMAN. I know that, but he has the power to delegate it.

Senator CONNALLY. I think that the President has got more burden on him than any one man ought to be called upon to bear.

The CHAIRMAN. I agree with that, but I say he has the power to make that delegation if he wants to do it. He set up the O. P. M.

Senator CONNALLY. We need a big double-jointed, two-fisted fellow to run this production organization and tell these factories and other people where to head in, and get some work done, not only the producers but the men that work in the shops. There is no time for strikes, either on the part of the employer by refusing contracts, or on the part of the men in the plants by refusing to work, by going out on strike.

Mr. NELSON. That is right, sir.

Senator CONNALLY. And we have to have some authority in this country to put over this program. We can talk about these squabbles

and things of that kind later on, through mediation or whatever they want to do; but right now the supreme effort of this Government ought to be to get this material and get it quickly, and I thank you for your contribution.

The CHAIRMAN. Did you have a question, Mr. Fulton?

Mr. FULTON. Along the line of the question of whether we can have more of these prime contracts, it is largely an administrative question, is it not? That is, the question of whether we can administer a larger number of contracts and not just one of whether the industry is capable of making the article in question.

Mr. NELSON. It is administrative if you mean by that it is a management proposition. It is engineering. You would have to have an engineering organization. The Government would have to go into the business of manufacturing. The Army would really be the manufacturer. It is the manufacturer who does the final job of assembly. Now, true, you could contract for that, but, again, you would have to have somebody responsible for seeing that the smaller manufacturer made what he contracted to make. True, the Government could do it. In my opinion, that is the more laborious way of going about it. It could be done that way. I believe it could be. I believe the better way is to get the managerial and the engineering ability of manufacturers who have it, and get them interested in the proposition of bringing those smaller fellows into it, unselfishly, if they can, although I don't count much on unselfishness to do it. I think it is pressure that will do it. I think it is compulsion that has to do that thing. But I would rather see it done by people with proven ability than to set up separate organizations of that kind, either in the Army, or the Navy, or in O. P. M. I would rather see them responsible for setting up manufacturing plants to do this job.

Mr. FULTON. Then it would be your opinion that instead of trying to increase the number of prime contracts we should try to increase the number of subcontracts, but you very definitely are of the opinion that there should be an increase of subcontracts?

Mr. NELSON. Yes; but it follows with an increase in the prime contracts. You get an increased load, an increased speed, as the Senator has suggested, get that, and you will force it out because if you have got the will on the part of the Army and the Navy to do it—and I believe you have; you certainly will have the will if the supreme high command says, "We want this 6 months sooner than you have expected to get it to us"—they are going to try to do everything possible, whether it be subcontracting, or whether it be working four or five shifts, or whatever is necessary to do it.

Mr. FULTON. There will be at least a tendency——

Mr. NELSON (interposing). There would be more than a tendency, sir; there would be a necessity for it. Machine tools are the things we need most. Those machine tools are located in these smaller plants all over this country.

Mr. FULTON. But there are two ways of doing that. One way is to take the machine tools out of the plants——

Mr. NELSON (interposing). Which is the wrong way to do it.

Mr. FULTON. How would you prevent that by simply speeding up delivery dates?

Mr. NELSON. Well, sir, by speeding up the delivery date, at the very time you renegotiate the contract the manufacturer would say,

"We can't do it with the machine tools we have." We then force him to go out and subcontract with people who have the machine tools to do that thing. His assembly lines usually will take care of it. It is some bottleneck, an automatic screw machine, or a press, or lathe, or something that he needs in order to complete the whole picture.

Mr. FULTON. The speeding up isn't an automatic answer, because you can speed up in two ways: One, by getting the machines by requisitioning them wherever you find them and building them in your own plant; and the other, by doing the subcontracting. Now, if you are going to tell him this distinction, asking him to subcontract, you have the very administrative problem that, I thought, you were against giving to the Army.

Mr. NELSON. No, sir. Maybe I didn't understand your question. If by "administrative problem" you meant that the Army should force the subcontracting, I agree with you, sir. I thought you meant the assembly of these things in a plant, the Army buying the individual parts and then finally contracting for the assembly.

Mr. FULTON. I was mistaken.

Mr. NELSON. That is my fault. I would answer unqualifiedly "yes" to your question; I understand it now, it is an administrative problem.

Senator BALL. Can I interrupt there? It has impressed me, Mr. Nelson, that you have given us two definite ways in which we can speed up; first, by moving up delivery dates—

Mr. NELSON (interposing). Yes, sir.

Senator BALL. Second, by possibly requiring a contract that a certain percentage of it be subcontracted, which would mean renegotiating a number of these contracts.

Mr. NELSON. That's right, sir.

Senator BALL. Is O. P. M. doing that?

Mr. NELSON. Well, I started out, sir, and told you that it is our job to get the Army what they want when they want it. Now they set the delivery dates, the Army sets the delivery dates, so does the Navy, when they want these things. That is set. Many of these contracts were set with delivery dates, and as the Senator suggested—he hit the nail right squarely on the head—the problem is where a manufacturer can make all that he is required to make with one shift and still meet those delivery dates, in my opinion those contracts ought to be revised so that the speed is increased and the total amount produced by that fellow is increased so that he has to go to three or four shifts, and so that he then has to subcontract wherever his bottlenecks are, where additional machine-tool capacity is needed in order to meet that.

Senator BALL. Why isn't that being done? Has O. P. M. tried to sell it to the Army or the Navy?

Mr. NELSON. Yes, sir. I don't know why it isn't—I don't know why at the moment; I can't give you the answer, I truthfully can't give you the answer.

Senator BALL. Maybe we'd better get the Army and Navy up here and find out why they aren't doing it.

Senator CONNALLY. As a matter of fact—are you through?

Senator BALL. Just a second. What has impressed me up here, we had Mr. Knudsen, yourself, Mr. Knox, Mr. Stimson up here, and everyone has said we have to get more steam into this program. It

seems to me the O. P. M. is the agency that is supposed to be doing it. I would like to know why that isn't being done. I am wondering, for instance—you are secretary of the O. P. M., I suppose you are familiar with the personnel turn-over?

Mr. NELSON. No, sir; I am not secretary.

Senator BALL. I thought you were.

Mr. NELSON. No, sir; I am not. I just have charge of one small division.

Senator BALL. Do you know whether there has been any very high turn-over in O. P. M.?

Mr. NELSON. No, sir; I do not know the figures on turn-over, sir.

Senator BALL. It seems to me that to get this job done, the job is O. P. M.'s responsibility to put this steam into this production effort. Every one of its heads has come up here and told us it's got to be done, and if the people they have got over there now can't do it, then they ought to get rid of them and get somebody that can.

Mr. NELSON. They can do it. The Senator has the answer, and that is the only answer that I know of to do it.

Senator CONNALLY. In fairness to Mr. Nelson, as a matter of fact, the legal responsibility for making all these contracts is in either the Army or the Navy.

Mr. NELSON. Is in the Army or Navy, sir.

Senator CONNALLY. Your function is advisory?

Mr. NELSON. That's right, sir.

Senator CONNALLY. Of course, sometimes advisory is enlarged into—when you've got to okay them and clear them, it amounts almost to making a contract. Is that true? It was testified here yesterday that all these Army and Navy contracts have to clear through the O. P. M.

Mr. NELSON. Yes, sir; they clear through my office, sir.

Senator CONNALLY. And there is a veto power there, but at the same time if the Army says they want so many machine guns by July 1 you plan your production and your contract in accordance to their request. Is that right?

Mr. NELSON. That's right, sir.

Senator CONNALLY. This question Senator Ball asked you is why, instead of making that July 1, your O. P. M. doesn't make it April 1?

Mr. NELSON. The Army sets the time.

Senator CONNALLY. I understand, the Army sets the time. But now, on the other hand, if we could wake the Army up and wake the Navy up by some sort of a dollar watch, alarm clock or something, you could let these contracts at these earlier dates, and then when the manufacturer made them he would say, "Look here! I've got to get these things out by the 1st of April. How am I going to do it? I haven't got the machine tools. Well, I will have to get the machine tools or I will have to subcontract."

Mr. NELSON. Right, sir; you have the picture 100 percent.

Senator CONNALLY. When you have to do something by 12 o'clock, the Senate meets at 12 o'clock, why, you are supposed to do what you've got to do before 12 and be ready for 12 o'clock. Wouldn't that be the answer?

Mr. NELSON. You have the answer, sir, 100 percent, in my opinion.

Senator CONNALLY. Thank you.

Mr. NELSON. Now, I must say this. I don't like to leave the impression that the Army or the Navy are asleep in this. I don't believe they are. I believe they are a bunch of capable men.

Senator CONNALLY. I don't mean they are plumb asleep. They have fitful moments once in a while.

Mr. NELSON. I think they are very capable men, sir, and they are setting out to do a certain kind of job that has been put on the trestle board for them. Somebody has to put this design on that it's got to be speeded up and what we have to have 18 months from now to lick any possible combination of enemies in the world.

Senator CONNALLY. I didn't mean to criticize the Army and the Navy, but what I meant was, if we've got to do more than we are doing—and I think we ought, and the country feels that way—everybody has got to wake up, the Army and the Navy and the O. P. M. and all the administrative officers that have anything to do with spending this money which they asked Congress to appropriate, have got to wake up and get busy.

Mr. NELSON. Yes, sir, and management and labor too.

Senator CONNALLY. And if they can't do it themselves, they have to subcontract.

Mr. NELSON. That's right, sir.

Senator CONNALLY. The Army and Navy have got to do subcontracting as well as the rest of us. We have to do this job.

Senator MEAD. Mr. Chairman [to Senator Connally]. Finished now? Mr. Nelson, you said that you had but one small department.

Mr. NELSON. Yes, sir.

Senator MEAD. And I presume most of the important men down there in O. P. M. have a department, either large or small, and that's their responsibility. Senator Connally was talking about the efficacy of delegating every task to someone who has the time and the authority to do it. Senator Ball brought out the fact that you have two methods of expediting and spreading and expanding this program: One, moving up the dates; and the other, insisting upon subcontracting.

But if everybody has their department and their responsibility and their present duties, they are not going to go into it very deeply except from the standpoint of compulsion that you talked about. Now the subcontractor needs someone to take care of his needs. He may have the building, he may have the tools—

Mr. NELSON (interposing). He needs somebody to help him do his part of the job.

Senator MEAD. Yes. He may have the plant, the tools, and the help, but he may need a friend at court, and therefore it seems to me that in the O. P. M. set-up someone should be designated who has nothing else to do, to take care of the subcontracting program, and it might be his duty not only to see that the subcontractor is given a fair chance to participate in the program, but that his cash and his credit and his material—

Mr. NELSON (interposing). Right, sir—

Senator MEAD (interposing). Needs are attended to.

Mr. NELSON. That's all part of the problem.

Senator MEAD. And so in addition to the men that we now have in the O. P. M.—and I think in most cases they are doing an

excellent job—we should have, in my judgment, someone to head a department who would look after this subcontracting or the small contractors or whatever you want to call them.

Mr. NELSON. We have a department, sir.

The CHAIRMAN. Was not an effort made to organize pools all over the United States for that very purpose, among the little fellows, and it blew up for some reason best known to the set-up in O. P. M.?

Mr. NELSON. Well, I think, sir, machinery has been set up to do what Senator Mead has talked about. I think it is all dressed up, and what it needs is more orders, and it'll go.

Senator MEAD. It is my understanding that it was set up and notice was sent out and advice was given to the country to call on the Federal Reserve banks and information would be given to them.

Mr. NELSON. That's right.

Senator MEAD. But it looks to me like a skeleton organization. I think a man like yourself, for instance, or someone else well up in industry, ought to be designated and given power, the power that Senator Connally talks about, to really go to town on this small contracting program. I think it ought to be a major department rather than just a sort of skeleton set-up. I think we are on the right rack, I think we are expanding fairly rapidly, but in my judgment there is a great deal of equipment and a great deal of plant already going that is still idle and should be contributing to the national defense, and therefore I think it ought to be emphasized by having a major department rather than just this skeleton set-up that we have today.

Mr. NELSON. Yes; you are quite right, Mr. Senator. I got a letter from you the other day about a bill you had introduced to help finance these smaller subcontractors, and it is a very important part of the problem, of course. I don't minimize at all anything that you have said. I agree that that is a very important part of our activity. I am confident—I may be entirely wrong—that, given a greater load and given an urgency for getting it out faster—you will see that department enlivened into action, because that is the only way I know that it can be done.

Senator MEAD. Not so long ago, one of the representatives of the manufacturers' association of my State was in my office, and I was very much surprised, I was astounded to learn of the large number of going factories that were not now participating in defense orders, and the large number of plants and factories that were idle, empty, and no use was being made of them, and so it occurs to me that somebody with plenary powers ought to be given complete charge of this subcontracting program. It ought to be emphasized, and if they need money, if they need credit——

Mr. NELSON (interposing). If they need material——

Senator MEAD (interposing). Material priorities, research or management, it ought to be given to them.

Mr. NELSON. Well, I was down in the town of York the other day, went down there. York, Pa., has done a magnificent job of combining the larger manufacturers. They had some very unusual large manufacturers down there, and have combined the ability of the smaller fellow and his machine tool capacity with the engineering skills and the managerial ability of the bigger concerns, and they are just going to town in York on this problem.

Senator MEAD. They are doing the same thing in Baltimore, I am told by representatives of the S. E. C. They passed the hat. All the manufacturers were called upon to make a contribution. They set up an organization. That organization is an organization that furnishes advice, engineering, research, credit, and aids them in securing cash, if it's necessary.

The CHAIRMAN. That system originated in Kansas City, Senator Mead. That's where they first set it up.

Mr. NELSON. I believe that is true, Mr. Senator.

Senator MEAD. But it only goes to show that at this particular juncture we need a national set-up on that same order, a national set-up with plenary powers.

Mr. NELSON. Give us an increased speed and an increased load, and we'll have to do it. It's the only way it can be done. You haven't the machine-tool capacity to do it otherwise.

Senator MEAD. It is my understanding that the Board of Governors of the Federal Reserve Board have recommended legislation that would enable the Federal Reserve Bank to make loans other than for working capital purposes to the plants and the factories of the United States. Today they are limited, they can only make loans for a short period of time, for working capital only, and no loans for machinery, no loans for plant expansion or anything like that that would put them in line to cooperate in this defense program.

Mr. NELSON. Yes, I think that would expedite it. Of course they can get money through the R. F. C. or through the Army and Navy where they have a subcontract.

Senator MEAD. Under restrictions. They first have to come to R. F. C. with a contract, and then get the money. Or they come down to R. F. C. with a plant and want some added machinery. Then R. F. C. will buy the machinery and lease it to them.

Mr. NELSON. That's right.

Senator MEAD. But there are a great many plants that have neither the contract nor the machinery, and they haven't a credit rating any place.

Mr. NELSON. That's right, and I am sure that that is a problem, a real problem.

Senator MEAD. That is all, Mr. Chairman.

The CHAIRMAN. Go ahead.

Mr. FULTON. Along the line of Senator Mead's point about power. do you think that there should be requisitioning of tools before the manufacturer has established very definitely, by real evidence, that he can't get the material by subcontracting?

Mr. NELSON. Well, I certainly—the answer to that would certainly be “no.” I think the first effort should be made to use that tool where it is, rather than take it out.

Mr. FULTON. And that is because of that dislocation of labor and other things that you mentioned?

Mr. NELSON. Exactly. Yes, sir. And because you've got to keep up your civilian morale in every way you can. Wars are fought today through civilian morale. It is the morale of the civilian that enables a country to have the determination to follow through on any kind of war that will come, and the more you disrupt your civilian economy needlessly, unnecessarily—where we have to do it, we should do it.

but where it is unnecessary to do it I am in favor of not doing it, and I am in favor of trying to use that machine where it is first, rather than take it out of the community and move it away. When these smaller communities lose their machinery—first they lose their men and then they lose the machinery. They don't get it back.

Mr. FULTON. And the building isn't worth anything.

Mr. NELSON. What happens after this thing is all over, if the machinery is all moved into a few spots in this country? What happens to the picture? We are fighting for a strong country after this thing is all over, and we have to do everything we can to prevent having those economic deserts in this country when this thing is all over. I should say unqualifiedly we should try to use the machine in the spot where it is, before we try to requisition it.

Mr. FULTON. And if you don't use it where it is, usually you would have to increase the plant building where you expect to use it.

Mr. NELSON. That's right.

Mr. FULTON. And that would mean a drain on construction and labor.

Mr. NELSON. Additional expense, and so forth.

Mr. FULTON. And perhaps the defense housing—

Mr. NELSON (interposing). That's why I am so strong for this subcontracting.

Senator CONNALLY. Mr. Nelson, we couldn't requisition one manufacturer's tools and turn them over to another private manufacturer.

Mr. FULTON. Can under the new bill.

Senator CONNALLY. The new bill isn't law yet.

Mr. NELSON. But you can buy them, sir.

Senator CONNALLY. Well, of course, but I mean it would be unfair to one citizen to say, "We'll take your property away from you and turn it over to another man to use and make money and make a profit out of it."

Mr. NELSON. I wasn't commenting on that particular phase. What I meant, Mr. Senator—

Senator CONNALLY (interposing). I know what you mean. Induce them to turn it over, either by contract or pay or rental.

Mr. NELSON. That's right.

Senator CONNALLY. I agree with you on that.

Mr. NELSON. And I don't like to see this going out into smaller towns and buying up the machinery of smaller plants and moving them into large areas.

The CHAIRMAN. If we are going to set up a fascist industry, there is no use fighting for democracy in government, is there?

Mr. NELSON. That's right, sir.

The CHAIRMAN. That's all, Mr. Nelson. Thank you very much.

The committee will recess until 10:30 Tuesday. It will continue with the small-business program at that time.

(Whereupon the hearing was adjourned at 11:45 a. m., until 10:30 a. m., on Tuesday, June 10, 1941.)

INVESTIGATION OF NATIONAL DEFENSE PROGRAM

TUESDAY, JUNE 10, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING
THE NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:45 a. m., pursuant to adjournment on Thursday, June 5, 1941, in room 104, Senate Office Building, Senator Ralph O. Brewster presiding.

Present: Senator Ralph O. Brewster (acting chairman).

Present also: Hugh A. Fulton, chief counsel; Charles P. Clark, associate chief counsel.

Acting Chairman BREWSTER. We will proceed in the absence of Senator Truman and Senator Connally.

Will you raise your right hand and swear that the testimony you are about to give in this committee hearing will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. BRENNAN. Yes.

TESTIMONY OF THOMAS M. BRENNAN, SECRETARY, NATIONAL INDUSTRIAL COUNCIL, NATIONAL ASSOCIATION OF MANUFACTURERS, NEW YORK, N. Y.

Acting Chairman BREWSTER. Your full name, Mr. Brennan?

Mr. BRENNAN. Thomas M. Brennan.

Acting Chairman BREWSTER. And what is your previous experience in industrial matters?

Mr. BRENNAN. I have been secretary of the National Industrial Council for about 4 years.

Acting Chairman BREWSTER. What were you before that?

Mr. BRENNAN. I was with the Bankers' Trust Co.

Acting Chairman BREWSTER. And this is an association of manufacturers, is it, or what is its nature?

Mr. BRENNAN. Not exactly, sir. The National Industrial Council is in the nature of a conference group of State, local, and national manufacturing organizations.

RESULTS OF SURVEY OF PRODUCTIVE FACILITIES BY NATIONAL INDUSTRIAL COUNCIL

Mr. BRENNAN. This survey about which I will tell you was conducted by the State and local organizations since it was fanned out on a State basis.

Acting Chairman BREWSTER. Your sources of information would be industrial groups in the various States?

Mr. BRENNAN. No, sir; the industrial groups sent out questionnaires to the actual plants, and our information then is based on the replies given to those questionnaires by each of the plants.

Acting Chairman BREWSTER. But your contact was with the State groups rather than direct with the individual plant.

Mr. BRENNAN. In most cases. In every State in which there was a State group through which we could work it was done that way. There were variations. In some States we handled it directly from our New York office, and in some States it was done by a regional set-up within the States.

Acting Chairman BREWSTER. And has the council done work of that character before in compiling statistics?

Mr. BRENNAN. No, sir.

Acting Chairman BREWSTER. That was done on account of this emergency?

Mr. BRENNAN. That is correct.

Acting Chairman BREWSTER. As I understand, you have a report covering the results of that survey.

Mr. BRENNAN. Yes. I do have it here, and I thought perhaps the quickest way to give you an over-all picture to it would be just to read it.

Acting Chairman BREWSTER. All right; sir, you may do so.

Mr. BRENNAN. I first indicate that these folders include samples of forms and materials used in the survey and for purposes of referring to them perhaps it would be worth while to introduce them as an exhibit.

Acting Chairman BREWSTER. It may be admitted to the record.

(The documents referred to were marked "Exhibit No. 67" and are on file with the committee.)

Mr. BRENNAN. I have just a page or two of background material on the survey and how it was used, before we get into the statistical data.

Acting Chairman BREWSTER. Yes; but first, about these exhibits. This report of the results of the Preparedness Through Production Survey by your council has been filed with the authorities here in Washington, has it?

Mr. BRENNAN. Yes, sir. It was presented to Mr. Knudsen and Mr. Hillman formally.

Acting Chairman BREWSTER. And this other publication, what does this consist of, the National Defense booklet?

Mr. BRENNAN. Suppose I just read this one paragraph.

Acting Chairman BREWSTER. Does that explain it?

Mr. BRENNAN. Yes, sir.

Acting Chairman BREWSTER. Very well, go ahead.

Mr. BRENNAN. I will come to each of them as we go along.
[Reading:]

In December of 1940, speaking from the platform of the Congress of American Industry held by the National Association of Manufacturers, Mr. W. S. Knudsen, Director General of the Office of Production Management, first apprised the country of the "terrible urgency" of the defense situation. He stressed the need of speeding production by spreading the work. He recommended particularly wide subcontracting.

Mr. FULTON. Would you try to speak louder and more distinctly?
Mr. BRENNAN (continuing):

It was apparent that the first need was a recording of the productive facilities which were at least potentially available for defense production. Their availability known, the facilities of these plants might well be able to help our defense program, some in a subcontracting capacity, some in a prime contracting capacity, some in both.

To this end, 83 State and local associations, listed in the appendix, collaborated with the National Association of Manufacturers and the National Industrial Council in unearthing these facilities and making a compilation of the data. Questionnaires received as of the latter part of March for inclusion in the national statistical report showed that 18,002 plants had registered their facilities, and returns had been received from all of the 48 States.

It must be borne in mind that the Army and Navy agencies had surveyed some 20,000 larger plants and 10,000 of these had already been allocated to the production of defense items. In addition, many of the remaining manufacturing plants were so small that their equipment would not, as a practical matter, lend itself to defense production. For these reasons, many of the plants in these two categories were excluded in our survey.

Before reviewing the specific information revealed from the replies to the questionnaire, it may be of interest to note the manner in which the replies and the information given therein have been utilized.

1. An over-all statistical picture for the Nation was compiled, following an outline previously agreed upon by Office of Production Management Production Division and its Bureau of Research and Statistics, in consultation with a representative from the research department of the National Association of Manufacturers. A summary of this data is outlined below, and copies of the accompanying interpretative memorandum will be made available to the committee.

You will find that that is one of the documents in the exhibit.

As a further phase of this report, a detailed break-down on the types of the various training programs now in use has been presented to the Training-Within-Industry Section of the Office of Production Management.

In addition to that, complete data on these directory sheets having an outline of the various plants, the city in which they are located, number of employees, and the machine tools as well as the general machines, have been made available to the Defense Contract Service.

2. To provide ready reference files of this information, the questionnaires themselves, immediately after the data had been set up on punch cards, were returned to the 83 associations that participated in the survey. In addition, a cross-reference was supplied in the form of so-called machine directory sheets, which listed all the plants for a given area, usually a State, in alphabetical order, showing for each its location, number of employees, number and types of machine tools and machinery.

A pamphlet listing these "information sources" and the respective areas for which each has plant information has been sent to all prime contractors, the Defense Contract Service, and Army and Navy Procurement agencies.

I may say as quickly as a new prime contractor is added to the list he receives one of these booklets, this booklet, Directory of Information Sources.

3. Now the tabulated data has been compiled on directory sheets on a "community" basis for major industrial centers all over the country. This information for their areas has recently been made available to some 50 additional local associations affiliated with the National Industrial Council, urging that they use it as a nucleus around which to build complete data for their respective areas.

It is our purpose to continue to stimulate local groups to take the leadership in this activity in the other communities for which this data has been assembled.

To assist in setting up appropriate local procedures, we have prepared an informative manual.

That is this manual, sir, that you asked me about.¹

This informative manual does not advocate any specific form of cooperation among employers to obtain defense contracts, but advises on methods to coordinate a cooperative activity and urges that employers in each community use this type of activity wherever possible, adapting the form to the circumstances of the community.

In the national statistical picture, these following important facts were disclosed:

First, 18,002 plants and their facilities are registered in various agencies throughout the Nation; 14,077 of these were registered in our so-called "Preparedness Through Production Survey"; 3,925 plants were surveyed by other organizations. That had been done either previously or concurrently with our survey, so that we didn't attempt to duplicate, since the data being tabulated was sufficiently similar to provide the information which was necessary.

The following facts, which I am now about to read, are based on the 14,077 returns to our factual survey, since they are the ones that would lend themselves to the statistical compilation.

Sixteen major industrial classifications are represented in the returns; 39.4 percent of them are in the metal trades.

Three thousand nine hundred and ninety-four plants, or 28 percent of the total, are already engaged in defense production; 4,539 additional plants, or almost one-third of the total specifically expressed their interest in producing defense items. In other words, slightly over three-fifths of all the companies replying specifically indicated a direct interest in defense production. The remaining two-fifths are very largely in industries which to date have not been recorded as mainly and directly in the field of defense production.

There are registered 434,159 machines; 7,509 plants reported 398,141 machines, or a theoretical average of slightly over 53 machines per plant.

There were reported to be idle, 157,000 machines for a total of over 2,000,000 hours during a 24-hour day. This represents a theoretical average of 14 idle hours per machine in each 24-hour day.

In interpreting these figures it must be borne in mind that there are many practical difficulties in the way of complete 168-hour operation of machines, these including, among others, the lack of balance between various types of machines in operation in the plant; time required for oiling and repairing machines; set-up time; the difficulty of securing a sufficient supply of skilled labor; the problem of adequate efficient supervision; the dissatisfaction of existing labor if it is not given an opportunity to earn overtime; and the dangers involved in placing even skilled workers on unfamiliar expensive machines.

Eleven thousand plants reported a total of 650 million square feet of floor space; 2,915 of these plants reported over 46,000,000 square feet of unused floor space, 8 percent of the total floor space reported; 4,881 plants expressed a willingness to install equipment for defense production.

¹ National Defense, a booklet included in Exhibit No. 67.

Over one and a half million employees were reported by 10,818 plants; 45 percent of the total employment was skilled, and 82 percent of the total were males.

There were 10,719 plants that reported operating shifts as follows: One shift, 72 percent; two shifts, 10 percent; three shifts, 8 percent.

Estimates of additional skilled labor if production were stepped up were reported as follows: 1 shift, 2,890 plants said they would require 65,325 additional skilled labor, or an average of 23 per plant. To operate at full 2-shift capacity, 3,214 plants said they would require an additional 141,346 employees, or an average of 44 per plant. To operate at a full 3-shift capacity, 3,105 plants said they would require 205,664 additional employees, or an average of 66 per plant.

There were 2,946 plants that reported having various training programs in the following proportions: Apprentice, 48 percent; technical apprentice, 42 percent; machine operator, 37 percent, supervisory, 34 percent; learner, 29 percent; short-term job, 10 percent. And 4,987 plants indicated that through training programs they could expand their skilled labor force in varying proportions in 3 months without hiring additional skilled labor from outside.

In the appendix are listed the various 83 associations that cooperated with us.¹

Acting Chairman BREWSTER. What conclusions, if any, did your association form as a result of this survey, as to how we might expedite production? That was a very interesting tabulation that you have given us.

Mr. BRENNAN. Well, we felt that from an industrial organization standpoint, probably the most important job that could be done was to keep the information up to date, extend its coverage as completely as we could, and have it always available so that if and when the need arose we were in a position to provide the information.

Acting Chairman BREWSTER. Do you find any reluctance on the part of those that participate in your survey to subcontract?

Mr. BRENNAN. That wouldn't develop in this survey, sir. We asked certain specific plant data, you see, and it was confined to a questionnaire, and having filled out the questionnaire they had complied with our request.

Acting Chairman BREWSTER. What percentage did this indicate of idle machine tools?

Mr. BRENNAN. I don't think I understand your question, sir.

Acting Chairman BREWSTER. Expressed in terms of percentages—you have given the number, but what were the results of your survey as to idle machine tool capacity?

Mr. BRENNAN. Do you mean total capacity available in the Nation?

Acting Chairman BREWSTER. That is right.

Mr. BRENNAN. No; we wouldn't get that, sir. Our returns are based on the number of plants from whom we have received information.

Acting Chairman BREWSTER. What would that show?

Mr. BRENNAN. As contrasted with what?

Acting Chairman BREWSTER. The totals. You have returns from plants showing some of them are occupied and some of them are unoccupied with activity of any kind, haven't you?

Mr. BRENNAN. Yes, sir.

¹ Referring to Exhibit No. 67.

Acting Chairman BREWSTER. Now, what is the percentage of idle machine tool capacity? That is what we want to know.

Mr. BRENNAN. In proportion to what figure?

Acting Chairman BREWSTER. In proportion to the totals as shown by yourself. I understand you don't have the total in the country, but you have the total return showing active and idle machine tools.

Mr. BRENNAN. Oh, yes. We had a theoretical average of 14 idle hours a day. Would that begin to arrive at what you want?

Acting Chairman BREWSTER. That is one way of putting it; that is your total that you showed, 10 hours used and 14 hours unused. Is that it?

Mr. BRENNAN. That is right, each 24-hour day. That is a 24-hour day.

Acting Chairman BREWSTER. That included all of the plants from which you had returns?

Mr. BRENNAN. That is correct.

Acting Chairman BREWSTER. Which are engaged in defense, non-defense, and no activity?

Mr. BRENNAN. That is right.

Mr. FULTON. Except it did not include, apparently, the 4,000 plants that the affiliated organizations—

Mr. BRENNAN (interposing). It included the plants that were within the scope of our study.

Mr. FULTON. So that it would be increased by whatever figure that would be applicable to the other 4,000 not complying.

Acting Chairman BREWSTER. You gave in conclusion some figures about skilled labor. As I understood, a certain number of the plants reported that they could expand in 3 months. What proportion was that?

Mr. BRENNAN. Let me read you the question. The question said: "By what approximate percent can you expand your working force in 3 months without hiring additional skilled workers or supervisors?" We had ranges to such an extent that it was impossible to form any average. It just wouldn't mean anything, do you see, statistically.

Acting Chairman BREWSTER. So that your answer to that question really didn't mean anything.

Mr. BRENNAN. No, sir; that was not one of our better questions.

Acting Chairman BREWSTER. You gave some comment on it there. What were those results you reported?

Mr. BRENNAN. Do you mean the types of training programs that they used?

Acting Chairman BREWSTER. Right at the conclusion of your statement.

Mr. BRENNAN. We said that 4,987 plants indicated that through training programs they could expand their skilled labor force in varying proportions, you see, within 3 months, because it was impossible to be any more specific statistically.

Acting Chairman BREWSTER. Although you realize that maybe at the root of our whole problem, if we continue to have skilled workers walk out on us, it is going to be entirely a question of what we can do with unskilled workers in training.

Mr. BRENNAN. That is right.

Acting Chairman BREWSTER. Are you taking any steps to get further information on that score?

Mr. BRENNAN. No, sir; we haven't. What we have done is prepare a little more detailed study relating the training-within-industry programs to the various industries, those which are in defense, according to our figures, and those which are in nondefense, and we have made that available to the training-within-industry programs.

Acting Chairman BREWSTER. You realize in determining the policy of the Government as to the future conduct of our defense effort, one of the vital factors must be to what extent we are at the mercy of the present skilled workers. They simply refuse to work. Never, so far, has it been suggested that we could draft them into industry. If they simply sit down and stay out, we have got to know how long it would take to fill their places.

Mr. BRENNAN. That is right. In January, when we started to develop the questionnaire, you see our prime purpose was to locate machine capacity.

Acting Chairman BREWSTER. Yes.

Mr. BRENNAN. And we found this additional data more or less on a complementary basis, but not with the emphasis that we placed on machine tools. You will notice that in this questionnaire, most of the questions are built around productive capacity.

Acting Chairman BREWSTER. Your 14 hours out of 24 would indicate approximately 60 percent idle capacity. Would that be a fair conclusion?

Mr. BRENNAN. For a 24-hour day; yes.

Acting Chairman BREWSTER. There would be modification as to where you can use a machine tool 100 percent. You pointed that out. But at any rate, these machine tools in your survey which covered—how many hundred thousand did you say?

Mr. BRENNAN. Fourteen thousand plants. Do you mean the number of machines?

Acting Chairman BREWSTER. Yes.

Mr. BRENNAN. 434,159 machines.

Acting Chairman BREWSTER. You covered 434,000 machines, and you found that they were 60 percent of their time idle? Correct?

Mr. BRENNAN. That is right.

Acting Chairman BREWSTER. Approximately.

Mr. BRENNAN. Yes.

Acting Chairman BREWSTER. To what extent would that be limited by the lack of skilled operators?

Mr. BRENNAN. We have nothing in this survey that would reveal that. That wasn't brought out.

Acting Chairman BREWSTER. Did your survey indicate to what extent those were completely idle 24 hours a day?

Mr. BRENNAN. There is here Miss Jackendoff, who handled the statistical end.

Acting Chairman BREWSTER. You referred to her. She should come up and sit beside you.

Mr. BRENNAN. Did you understand the question?

STATEMENT OF MISS RUTH JACKENDOFF, STATISTICAL DEPARTMENT, NATIONAL ASSOCIATION OF MANUFACTURERS, NEW YORK CITY

Miss JACKENDOFF. I should say that the 60 percent idle capacity related only to the idle machines, and that was 157,000 rather than the 434,000.

Mr. BRENNAN. Oh, really?

Acting Chairman BREWSTER. Do you mean that you found 60 percent of these machines idle?

Miss JACKENDOFF. Those figures refer to all of the idle hours reported for all the machines. Some may have been idle 6 hours, 4 hours, or 16 hours a day. This was a total of all the idle hours reported, divided by the total number of machines.

Acting Chairman BREWSTER. Based on how many?

Miss JACKENDOFF. On the average there were 14 idle hours.

Acting Chairman BREWSTER. Based on how many machines?

Miss JACKENDOFF. One hundred fifty-seven thousand, I believe.

Acting Chairman BREWSTER. One hundred fifty-seven thousand?

Miss JACKENDOFF. Yes; 157,000 machines.

Acting Chairman BREWSTER. What was the 434,000 figure?

Miss JACKENDOFF. That was the total number registered in the survey.

Mr. BRENNAN. And not all of them indicated whether they had idle hours or not.

Mr. FULTON. So as to approximately one-third that indicated they had idle hours, there were about 200 idle hours for that one-third only?

Mr. BRENNAN. That is right.

Acting Chairman BREWSTER. And whether the remaining 200,000 machines are being used 24 hours a day or not at all, you do not know.

Miss JACKENDOFF. They may or may not. All plants reported at that time.

Mr. BRENNAN. We would be in no position to say.

Mr. FULTON. Except that by your survey, by noting that in most cases they used only one shift, it is quite evident that they must be idle a good share of the time, is it not?

Miss JACKENDOFF. I believe that the conclusion that can be drawn from this is that those plants which are not in defense production are working only one shift a day.

Mr. FULTON. You have a figure of 72 percent of them operating on one shift, so it is quite obvious there would be a great deal of idle time.

Acting Chairman BREWSTER. And when they are operating on one shift, you can assume that they are idle about 66 percent of the time, about 16 hours out of the 24, at least.

Miss JACKENDOFF. That is right.

Acting Chairman BREWSTER. So that the figure wouldn't presumably be reduced if you had a complete tabulation. It probably would be increased rather than otherwise.

Miss JACKENDOFF. Yes.

Mr. BRENNAN. Of course, I think that probably you would want to keep in mind there, too, that when you expand it to the complete number of plants, you are by the same token including a lot of plants that are outside metal trades. Forty percent of them are metal trades, and we very likely would find that the heaviest idle time was in that 60 percent of plants that were not in the metal trades.

Acting Chairman BREWSTER. What was the average number of machine tools in the factories that you surveyed? Do you have that?

Miss JACKENDOFF. I am afraid we didn't attempt to arrive at such an average. It would be highly artificial since our plants were of all sizes. We have some fairly large ones, medium sized, and very small. Some of them reported half a dozen machine tools, perhaps, and some had several hundred, so that an average in this case would be indicative of nothing at all.

Mr. FULTON. You could obtain the average by dividing 14 into 434,000.

Miss JACKENDOFF. Yes.

Mr. BRENNAN. The difficulty with that, sir, is that not all plants reported machinery. I mean of the total 14,000, it doesn't mean that all had machinery reported on their questionnaire.

Mr. FULTON. These were more than 30 machines to the average plant.

Acting Chairman BREWSTER. Where we are, of course, interested in is as to where this program may be expedited. In your position as representatives of industrial groups, we would very much appreciate any suggestions which you have as to how this thing might be integrated.

Mr. BRENNAN. Sir, I feel—we have felt all along that our job from an industrial organization standpoint is to be sure that we have the available information when the need is determined and the load is put on industry. That is what we have tried to do. The problems of engineering and production are a little bit outside the field of industrial organization.

Acting Chairman BREWSTER. We appreciate your information, but I think we would appreciate a little more suggestion. I don't think you need to be sensitive. After all, we are all Americans here, interested in one goal. I know the boys in O. P. M. and the Army and the Navy are all trying to do the best they can, and undoubtedly they are overlooking some bets. Haven't you anything to suggest as to how this liaison, which is emphatically necessary, can be accomplished?

Mr. BRENNAN. I don't think so, sir. I don't think I have got a broad enough and a competent enough knowledge to make a statement that I think would be valuable.

Acting Chairman BREWSTER. Have you heard from any of these plants which you have surveyed as to their anxiety to do Government work?

Mr. BRENNAN. Yes; we have, in a limited number, because, of course, the basis of our contact with them has been merely to get the questionnaire in their hands and to ask that they send us back the questionnaire, and, of course, it would only be when they took the trouble to write a covering letter that we would get additional in-

formation. Usually we asked a rather complete detail on the questionnaire itself.

Acting Chairman BREWSTER. Did they indicate anything as to what difficulties they experienced in getting Government work?

Mr. BRENNAN. No, sir. You must remember that our prime purpose was to locate and get the data on the tools and having given us that data, which was the whole purpose of our survey, they complied with our request.

Acting Chairman BREWSTER. Was there any reluctance indicated in undertaking Government work?

Mr. BRENNAN. No; I don't think so, sir. You must remember that much of the publicity that we built around this survey was to stimulate a patriotic interest so that we feel that the full 18,000—not only those that responded to our survey, but those that responded to other organizations' surveys—by the mere fact of their response, indicated at least a patriotic interest in doing whatever was their job. Many of them, as a matter of fact, indicated that they didn't have, to their mind, the type of tools that could be used at all, but they wanted to go as far as saying, "Well, this is what we do have, and if there is something outside of our knowledge that we can do, we are ready to do it." That was the type of interest that we found.

Acting Chairman BREWSTER. Did you have any contact with the new set-up in the Federal Reserve districts to expedite subcontracting?

Mr. BRENNAN. Yes, sir; we gave them the complete run of all the 14,000 plants by States on these sheets, and in addition to that, we contacted all of our people in the field, suggesting that they find out a way to make copies or some facsimiles of the actual questionnaires and turn them over in every case, in every situation, where it was possible to the Defense Contract Service so that they would have complete information. That was worked out with Mr. Trecker, who at the same time sent a letter to his various offices suggesting that they contact the list of associations, looking toward the same purpose.

Acting Chairman BREWSTER. Did you find any expressions as to difficulty in doing business with the Government in the matter of contracts, terms, payments, or other difficulties of that character?

Mr. BRENNAN. That wouldn't come, also, either within the realm of this.

Acting Chairman BREWSTER. There is nothing that would develop that type of information?

Mr. BRENNAN. No, sir.

Acting Chairman BREWSTER. And you don't recall any particular communications you had on that score?

Mr. BRENNAN. Not of sufficient quantity to be of value.

Acting Chairman BREWSTER. In the old days there was a good deal of concern on that line, and we were very much interested to know whether that difficulty is being eliminated in substantial measure.

Now, Mr. Fulton, are there any other matters that we should develop from Mr. Brennan?

Mr. FULTON. I understand that the machine-tool industry, which is one of our most overburdened industries, is manufacturing certain machine tools which are not specialized, but which are general-purpose tools. Is that in accordance with your understanding?

Mr. BRENNAN. That wouldn't develop in our surveys, sir.

Mr. FULTON. I show you a letter from the Office of Production Management which says that this year we expect to manufacture 13,000 turret lathes. Are turret lathes general-purpose tools?

Mr. BRENNAN. I think you would have to ask that question of an engineer, sir.

Mr. FULTON. Might I ask if you didn't include them in your survey as a general-purpose tool?

Mr. BRENNAN. Oh, yes, sir.

Mr. FULTON. And similarly, they are manufacturing 27,000 milling machines. What I had in mind is this: Have you, in your survey, tabulated the total number of these general-purpose machine tools which are available in private industry in these plants that you have surveyed?

Mr. BRENNAN. No, sir; we didn't arrive at the totals of machine tools. I have indicated to you that we drew up our statistical analysis on the basis of the previous memorandum that had been worked out jointly with the O. P. M. staff.

Mr. FULTON. It seems that it might be important to determine, first, how many of these general purpose tools we are making at this time new, for new plants, and then at the same time to compare that with the number of those same general-purpose tools that exist already in the United States in plants that at least part of the time are idle and which could take defense contracts. I understood that you were willing to work with the O. P. M. and that they were willing to work with you in attempting to compile for us that kind of statistics on the 6, 8, or 10 most common general-purpose tools.

Mr. BRENNAN. We would be glad to do what we can along those lines.

Mr. FULTON. And to run through your cards that you have for the purpose of making that kind of tabulation. I think this committee would appreciate it if that could be done.

Mr. BRENNAN. We can do that. We would be glad to work it out with them.

Mr. FULTON. Then, if the committee finds that there are large numbers of these tools which are in fact being duplicated now at a time when we need the machine tool industry facilities for more specialized equipment, a question would arise as to whether certain plants ought not to be examined for the purpose of ascertaining whether, instead of subcontracting for new tools, they should buy tools of that type that already exist elsewhere.

Acting Chairman BREWSTER. You would recognize that it is much better to use existing tools as far as possible rather than to produce additional ones?

Mr. BRENNAN. I should think so.

Acting Chairman BREWSTER. And that the necessary skills could be just as well applied to use tools more than 8 or 10 hours a day, even if we couldn't use them 24 hours.

Mr. BRENNAN. Recognizing the skilled labor bottleneck.

Acting Chairman BREWSTER. That the skilled labor bottleneck is the primary one.

Mr. BRENNAN. That is right.

Mr. FULTON. And then, of course, there is the advantage of not making an undue dislocation of labor.

Acting Chairman BREWSTER. Yes.

Mr. FULTON. Also of constructing a new plant which, in part, at least, would be larger because it was to include sufficient facilities of this general character to do a 100-percent job instead of a partial job for subcontracting. That is all I have.

Acting Chairman BREWSTER. We appreciate very much this contribution of your filing these returns with us and would appreciate it if you will keep the committee advised of any further materials that you are able to get.

Mr. MEHORNAY, do you swear that the testimony you will give in this case now in hearing will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. MEHORNAY. I do.

TESTIMONY OF ROBERT L. MEHORNAY, CHIEF, DEFENSE CONTRACT SERVICE, PRODUCTION DIVISION, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

Acting Chairman BREWSTER. Your full name?

Mr. MEHORNAY. Robert L. Mehornay.

Acting Chairman BREWSTER. Your position?

Mr. MEHORNAY. Chief of the Defense Contract Service of the Production Division of the Office of Production Management.

Acting Chairman BREWSTER. What is your previous experience?

Mr. MEHORNAY. My last experience is distributor of household furniture, home furnishings.

Acting Chairman BREWSTER. And who is your immediate superior?

Mr. MEHORNAY. John D. Biggers.

Acting Chairman BREWSTER. And what is the division that he has?

Mr. MEHORNAY. He is Director of the Production Division.

Acting Chairman BREWSTER. And you handle the Contract Service under him?

Mr. MEHORNAY. Yes, sir.

Acting Chairman BREWSTER. What was the scope of your responsibility as to tools—how long ago did you start in?

Mr. MEHORNAY. Seven months ago.

Acting Chairman BREWSTER. And what was the scope of your responsibility and instructions when you started?

**FORMATION AND FUNCTIONS OF DEFENSE CONTRACT SERVICE OF
OFFICE OF PRODUCTION MANAGEMENT**

Mr. MEHORNAY. If I may, I would like to divide that into two parts. We started in November of 1940 as the Office of Small Business Activities, having at that time only the obligation of assisting and directing the smaller establishments in their direct contacts with procurement officers and offices, and assisting in the financing of their work. That came along and developed from time to time with

the apparent new phases until on January 31 of this year it was reorganized into the Defense Contract Service, transferred from the Division of Purchases to the Division of Production, because of the fact that the Division of Purchases found that most of their items were of commercial nature for which there was plenty of capacity; while the Division of Production, handling almost exclusively engineer items for which there was no precedent in manufacturing, needed additional service because you couldn't just tell a man to make more—you had to tell him why and, rather, how to make it, what it was to be used for—primarily things that he had never seen. That was the reason for the turn-over, and at the time, of course, we took up in addition to the direct contracting, the subcontracting phase of it, containing the financial advice and services; and since that time have developed two units having to do with groups. One is only a month old. This job changes every day; you get a new angle every day, a new problem every day.

Acting Chairman BREWSTER. How many do you have with you under you and associated with you?

Mr. MEHORNAY. Twenty-one in Washington.

Acting Chairman BREWSTER. Yes. And you have some offices over the country?

Mr. MEHORNAY. We have suboffices in each of the Federal Reserve banks and branch banks.

Acting Chairman BREWSTER. What are your relations to those Federal Reserve groups now?

Mr. MEHORNAY. In the beginning, as Small Business Activities, a designated officer of the bank, without any compensation, attempted to carry on the work of the Office of Small Business Activities. However, it became apparent, as we came into the more technical phases of the work, that those gentlemen, being highly trained in their own specialty, could not be expected to take on the engineering problems, production problems, which were naturally growing. So, early in February it was completely reorganized. The Federal Reserve banks and branches continued to furnish us gratis all of the housing that we need—space, light, heat, all services—and they continued to furnish us a financial consultant, all without any charge to the Government. I think it is quite a contribution on their part, if I may say so.

Then we set up reporting directly to us a business and technical staff, which staff carries on directly under us—the procurement procedure directings and advice, subcontracting, and engineering directings and advice, leaving the financial end to the banks, which they still carry on. So, our new set-up, the current one, is of that type—housed in the banks, but operated independently of the banks.

Acting Chairman BREWSTER. What part of your work comprises direct contracts or assistance in subcontracting? How is your work divided on that now?

Mr. MEHORNAY. The work on direct contracts has to do with directing the smaller men, and that is a rather relative term.

Acting Chairman BREWSTER. When you say "smaller," what does that mean? How does that divide it? What is a big contract, and what is a little one?

Mr. MEHORNAY. About \$10,000,000.

Acting Chairman BREWSTER. Anything over \$10,000,000 is considered big?

Mr. MEHORNAY. That is, too big for me.

Acting Chairman BREWSTER. That gets out of your class.

Mr. MEHORNAY. Yes, sir.

Acting Chairman BREWSTER. Anything under \$10,000,000 comes under your jurisdiction? Is that right, approximately?

Mr. MEHORNAY. Approximately; yes.

Acting Chairman BREWSTER. And what is the situation as to subcontracting?

Mr. MEHORNAY. In subcontracting we work with everyone, regardless of size. We are primarily attempting to bring a prime contractor needing subcontractors and subcontractors together, or to bring the subcontractor who wants to get into the picture to the prime contractor who has work which he needs to have done.

Acting Chairman BREWSTER. Is that within your responsibility?

Mr. MEHORNAY. Definitely; yes, sir.

Acting Chairman BREWSTER. To get the smaller contractors in position to do business either directly with the Government or indirectly through subcontractors?

Mr. MEHORNAY. That is our main objective; yes, sir.

Acting Chairman BREWSTER. And if there is any lack of liaison on that, that would be a matter which should be properly addressed to you?

Mr. MEHORNAY. That is correct.

Acting Chairman BREWSTER. You heard Mr. Brennan's testimony here about the idle machine capacity, which I presume has been known to you, approximately. You have had this survey of his. Have you had the survey that he has made?

Mr. MEHORNAY. Yes; the survey was turned over to us in two sections. The résumé and summary which Mr. Brennan discussed was delivered to us here in Washington. All of the detailed individual surveys, either in the original or a copy, were distributed to our various offices covering the territory which they themselves covered, so their surveys now are in our field offices, and the résumé as you have it here is in Washington.

Acting Chairman BREWSTER. His evidence indicated approximately 60 percent idle capacity in machine tools. That, of course, seems substantial to us. What is your observation on that from your experience now in the last 7 months?

Mr. MEHORNAY. It is an idleness of 60 percent of a 24-hour run.

Acting Chairman BREWSTER. Yes.

Mr. MEHORNAY. Which in our opinion is not a correct unit of measure. You can't run a machine 24 hours, and with the load that we have had put on us, only those highly specialized machines can be expected to run 24 hours.

Mr. FULTON. What would be the percentage of idleness that you would find?

Acting Chairman BREWSTER. That you would expect.

Mr. FULTON. No; I mean which he computes by reason of his investigation.

Mr. MEHORNAY. Well, we have made no investigation of idle machine-tool time.

Acting Chairman BREWSTER. I didn't understand that he challenged those figures. You didn't question the figures?

Mr. MEHORNAY. No.

Acting Chairman BREWSTER. You simply said you couldn't run a machine 24 hours a day.

Mr. MEHORNAY. You can't run a machine 24 hours a day, 7 days a week.

Acting Chairman BREWSTER. Mr. Brennan said that, too, and made it very clear.

The question is how much idle time must you allow for machine tools? Is there some figure you can give us on that that you would expect?

Mr. MEHORNAY. You must take this as a purely personal opinion. I think 20 hours a day is the maximum that a machine could be expected to run.

Acting Chairman BREWSTER. That is very good. You think we ought to aim at 20 hours a day occupation for a machine tool?

Mr. MEHORNAY. That would be my aim.

Acting Chairman BREWSTER. And if we achieve that, you would feel that we had done very well?

Mr. MEHORNAY. Excellent.

Acting Chairman BREWSTER. So that on your figure, you would say that we were 50 percent short of that goal. He indicated approximately 10 hours—14 idle and 10 occupied.

Mr. MEHORNAY. That is a figure that we have used in our calculations, not that 50 percent of the machine tools of America are idle.

Acting Chairman BREWSTER. No; I understand

Mr. MEHORNAY. But that 50 percent of machine-tool hours are not being used.

Acting Chairman BREWSTER. Do you feel that is a fair approximation of the present situation in the country?

Mr. MEHORNAY. I would think so, yes.

Acting Chairman BREWSTER. That is extremely valuable for us to know. Now, what measures are being taken by your organization right now to reduce that 50 percent idleness?

Mr. MEHORNAY. We are more interested in getting full single shifts—the work spread to other shops—than we are to multiple shifts; and men to multiple shifts would bring that average up. We have, on the one hand, the use of machinery where it is not employed. But employing it on this hand and not employing it on the other is not going to make any difference in your total hours used. The only way that load can be put on and brought from 14 to 20—

Acting Chairman BREWSTER (interposing). Ten to twenty.

Mr. MEHORNAY. I beg your pardon; 10 to 20 is to get sufficient load to put on those machines that the demand for production will necessitate their use. You have the capacity to produce—you can't use that capacity unless you have material to work on it and orders to fill.

Acting Chairman BREWSTER. Where do you say is your bottleneck? It certainly isn't machine tools, because according to you and according to all evidence, 50 percent of the machine tools are idle. It is either materials or operators or failure of the Government to get the contracts out. Where do you feel the difficulty is?

Mr. MEHORNAY. I don't believe we can answer it just that simply, meaning this, that a lot of your shortages are tied up with the production of specialized items for which your general-purpose tools are not adaptable, and to release a great portion of your general-purpose tools for that use, you must tie in some new special purpose tools.

Acting Chairman BREWSTER. You feel that the general purpose tools are probably in fairly good supply; do you?

Mr. MEHORNAY. Yes; I think they are.

Acting Chairman BREWSTER. Then why are we producing 14,000 more general-purpose tools right now?

Mr. MEHORNAY. You would have to get that from the tool section. You have me a little astray as to why.

Acting Chairman BREWSTER. You decline to express an opinion on that?

Mr. MEHORNAY. On another man's judgment.

Acting Chairman BREWSTER. Mr. Fulton, give me those figures. I want to be sure that I have given the right figures. That did puzzle us.

There were 13,000 turret lathes and 27,000 milling machines. Would those be considered general purpose?

Mr. MEHORNAY. Yes.

Acting Chairman BREWSTER. They are actually in process of production now, and that, of course, to a layman impresses one when we have 50 percent of our existing tool capacity idle, you see. It impresses us that that is a rather startling fact.

Now about the matter of skilled labor. You say that you are emphasizing now idle factories instead of idle machines, in the sense of trying to get more small industries producing rather than to make a double shift on the existing plants.

Mr. MEHORNAY. Yes, sir.

Acting Chairman BREWSTER. Why is that emphasis?

Mr. MEHORNAY. It is our belief that the smaller units, both as direct contractors and as subcontractors, can speed delivery and get the total delivery made quicker, that if we can take a single order of 10 units and have 5 plants make 2 each simultaneously, we will meet the thing we need most, which is speed.

Acting Chairman BREWSTER. How many plants are you attempting to deal with now? Have you any approximation of that?

Mr. MEHORNAY. I could only give you an approximation of the plants that we have in our various surveys. We have, of course, the 18,000 that the association has turned over to us.

Acting Chairman BREWSTER. You mean that is the Industrial Council Survey?

Mr. MEHORNAY. Yes, sir; we have some 6,000 which we have made up ourselves as we have gone along; we have some 12,000 which the Army and Navy Munitions Board has surveyed and allocated, and then we have—

Acting Chairman BREWSTER (interposing). There is, I assume, a duplication in those?

Mr. MEHORNAY. A tremendous duplication. We have a master card for each, and we find some cards with as high as six references on them. If there is anything in the world we have plenty of, it is surveys. I beg your pardon, sir, I didn't mean to be jocular.

Acting Chairman BREWSTER. I shall not criticize your comment. We are occasionally impressed with that ourselves.

Mr. MEHORNAY. But it does need correlation. We have approximately 60,000 names in our files that are being worked on to reduce them to a single card and single reference. That card which I mentioned is exactly the same as that used by the Army and Navy Munitions Board, so that it will fit their records both as to size, type, and information.

Acting Chairman BREWSTER. Your function is advisory, is it, in connection with clearing in the Army and the Navy?

Mr. MEHORNAY. Senator, I am not clear on the question.

Acting Chairman BREWSTER. You don't actually place contracts yourself?

Mr. MEHORNAY. Definitely do not. We have no contractual rights whatever.

Acting Chairman BREWSTER. It is the Army or the Navy chiefly that place orders for material, contracts?

Mr. MEHORNAY. Yes.

Acting Chairman BREWSTER. But you are consulted in connection with that. That is, I asked whether you function was advisory or in what way you describe it.

Mr. MEHORNAY. Entirely advisory.

Mr. FULTON. Are you consulted?

Mr. MEHORNAY. Yes.

Mr. FULTON. Before a contract is signed, are you consulted?

Mr. MEHORNAY. Not on all contracts.

Mr. FULTON. On all contracts under ten million?

Mr. MEHORNAY. On all contracts over \$500,000, the Clearance Section of O. P. M. is consulted.

Mr. FULTON. No; I was talking about your division.

Mr. MEHORNAY. Our division? We are only consulted on those which it is felt we could be of some benefit in the placing of subcontracts or the finding of subcontractors or the need of subcontracting is felt. Ordinarily, we never see them.

Acting Chairman BREWSTER. That you'd be dependent upon the Army or the Navy agency that might send over and ask you about production of certain items.

Mr. MEHORNAY. Entirely upon the judgment of the contracting officer and on his desire.

Acting Chairman BREWSTER. What volume of business does that result in for you?

Mr. MEHORNAY. For the last 20 days of May, the last figure I have, it amounted to about \$18,000,000.

Acting Chairman BREWSTER. You received inquiries about what you might do to help in connection with that?

Mr. MEHORNAY. We sat in on the placing of \$18,000,000.

Mr. FULTON. Senator, I am informed that preliminary estimates for May, I think, in total dollar value performance was something like a billion two hundred million, but that would not necessarily be the amount of contracts. Do you know, Mr. Cotton, how much the dollar value of the contracts was?

Mr. COTTON.¹ No; I don't. I don't know what the full figure covers. It undoubtedly covers items other than contracts.

¹ Joseph P. Cotton, General Counsel's Office, Office of Production Management.

Mr. FULTON. It covers, I think, the figure without the British and other subsidiary items, something over nine hundred million.

Acting Chairman BREWSTER. Do you refer now to orders placed or to deliveries?

Mr. FULTON. No; to the dollar value of orders placed, I thought.

Acting Chairman BREWSTER. That is a billion two hundred million?

Mr. FULTON. Yes.

Acting Chairman BREWSTER. Of which Mr. Mehornay was consulted—or participated would be the better word—in the placing of \$18,000,000.

Mr. MEHORNAY. May I be allowed to comment on that?

Acting Chairman BREWSTER. Yes, sir.

Mr. MEHORNAY. We are called in on the placing of subcontracts where the placement of subcontracts is a problem. That does not in any way reflect the amount of subcontracting, because practically all primary contractors have arranged for their subcontracting at the time they bid. Their arrangements have been made. Also, those who might not have done that have contacts—previous subcontractors, friends, associates—with whom they work automatically, and we do not hear from them. I do not think we could make any deduction from the 18 million that were problem subcontracts as to a justifiable conclusion as to what the total over-all was.

Acting Chairman BREWSTER. Suppose a small plant in the country took the matter up with you as to getting some work so that you hear from them. Your only service, primarily, would be to communicate their availability to the Army and the Navy agency involved?

Mr. MEHORNAY. No; if I may go through with that, Senator——

Acting Chairman BREWSTER (interposing). Yes.

Mr. MEHORNAY. If we have a man who comes to us and says he wants to do defense work, we ask, "What can you do? What type of plant have you? What are you equipped to make?" We give him a catalog of the Army, showing what they buy and where they buy it. It is rather confusing to most people. They buy it in 49 different places in the United States, and very few of those places buy more than a single class, and they do not duplicate. No matter where you are, you sell shoes to Boston; no matter where you are, you sell stoves to Jeffersonville, Ind. It is hard to find that out.

In the Navy it is more simple. General products are all bought here. Only the local items are bought near the 28 Navy establishments, but they just buy locally.

We give him that complete information, and it has become so valuable, we think, that we have published it and he can take it with him. Regardless of what he makes, we tell him just exactly where it is to be purchased, and also give him complete directions as to how to get on the bidders' list for that item. Then, if he will wait a minute, we will analyze his facilities and his normal product with him and tell him the things which we think he should attempt to make, because in most instances, particularly in the production part, it is a transition problem. He is going to try to make something he has never seen before. Our men, we think, know how to convert his abilities from his commercial product to a possible defense product. We give him that information and tell him where

to go. If he thinks he wants to try some particular thing, we will say, "Now, Mister, we have just exactly eight Army catalogs here. Let's look through them, see the pictures, the description, of the thing you want to try to make." That is one. We have another one—may I make a correction? There are eight catalogs of specifications, not all in one. They are departmentalized. There are seven from the Navy, there is one from the Procurement Division of the Treasury, and here are all the things that they buy. What would you like to try to make? This is the way you get on the bidders' list. Are you going to need any money? If you do, we will make you this firm statement: If you get a contract, we will make an issue of getting you the money, if you have to have it.

We have not yet failed once to get money to meet a Government contract. That is the general process of carrying that man through his prime contract.

Acting Chairman BREWSTER. Would this be a fair statement? In what might be termed the more simple articles, the agencies of supply are fairly well developed, and there aren't many simple items that they would be able to enter the field for and successfully bid. Would that be fair?

Mr. MEHORNAY. That is a very fair question and a very fair conclusion; yes, sir.

Acting Chairman BREWSTER. The real problem is going to be to persuade the large concerns who have been making complicated articles to let out some of those items which could be done by these smaller units. Isn't that the great problem in this thing?

Mr. MEHORNAY. We consider that our No. 1 problem; yes, sir.

Acting Chairman BREWSTER. And there is the problem of how far the larger concerns will feel inclined to experiment with these smaller, inexperienced units, I suppose; that is, they hesitate to put their name behind a product on which they must depend for some of the component parts on inexperienced organizations.

Mr. MEHORNAY. That is natural, and that is what happens.

Acting Chairman BREWSTER. How far can you go in using persuasion to get those small units together with the big ones?

Mr. MEHORNAY. By persuasion, I presume, sir, that you mean persuasion on the prime contractor?

Acting Chairman BREWSTER. That is right; he is the fellow.

Mr. MEHORNAY. It is an educational process with him. You recognize, of course, that we have no power of compulsion.

Acting Chairman BREWSTER. I don't know about that. I think the President has a lot of power right now.

Mr. MEHORNAY. Then may I be privileged to say, so far as has been proclaimed by the President, we haven't?

Acting Chairman BREWSTER. That is, up to the present time after a contract is once let, the Government's power to persuade them to subcontract is rather nebulous, as far as you know.

Mr. MEHORNAY. When a man has a contract as of now, it belongs to him, and I don't know of anything we can do to make him change it.

Acting Chairman BREWSTER. Is that a fair comment, Mr. Cotton?

Mr. COTTON. I don't know that I am in a position to answer that off-hand, sir. If you would like some statement on that from the General Counsel's office of O. P. M., I would be glad to get it. I don't feel equipped to give an off-hand answer to that at the moment.

Acting Chairman BREWSTER. There is no provision in the contract which reserves to the Government any right to specify that they shall use subcontractors as far as you know?

Mr. COTTON. Not at the present time, sir.

Mr. MEHORNAY. To the contrary, Senator, practically all contracts carry the provision that no part of them shall be subcontracted without the permission expressly of the contracting officer.

Acting Chairman BREWSTER. What is your impression as to the attitude of the larger concerns in this matter?

Mr. MEHORNAY. I think it is founded rather well on exhaustive investigation of it. We have yet to find one prime contractor who frankly says he will not, but he does say to you, "Why should I when I can meet or more than meet my delivery schedule without it?"

Acting Chairman BREWSTER. What are the Government's rights as to expediting the delivery schedule?

Mr. MEHORNAY. I wouldn't be able to answer that, meaning there possibly is a legal question involved that I wouldn't be competent to answer.

Acting Chairman BREWSTER. Isn't that going to be the most immediate problem as to expediting deliveries on existing contracts before we can get any more? Isn't that going to be the only way that we can clear away the obstructions to further production?

Mr. MEHORNAY. Yes, sir; that is entirely my conclusion.

Continuing that answer, Senator, if I may, it is tied up rather with the additional load that comes along. We ask a man to speed his deliveries, and he very naturally is going to say to you, "For what?" You are going to say to him, "For more orders," and he is naturally going to say to you, "What orders?" So, unless you can bring this load up to him, both the manufacturers and the employees, unless they can see definite work, there is no logic in asking them to speed up for idleness. So we feel that we have a dual problem there, to bring this load out quickly, completely; then we can show all of them why they must speed up in their work, why they must spread their work, why they must use subcontractors, getting ready for this additional program.

Mr. FULTON. Does that mean, then, that in order to get a man to do subcontracting, you have got to give him more jobs?

Mr. MEHORNAY. I think—

Acting Chairman BREWSTER (interposing). He means that is persuasive, I take it. Isn't that what you mean?

Mr. MEHORNAY. Yes.

Acting Chairman BREWSTER. It makes a good argument.

Mr. MEHORNAY. Of course, I wasn't invited here to ask the committee questions, but I can't refrain from continuing my logic that there is no reason for a man to speed up his delivery when he sees nothing but idleness behind it and the delivery is being made on the required schedule. They can see no logic to that.

Acting Chairman BREWSTER. I think that is a fair comment. We, of course, may want a gun very much today, although we may not be placing an order for another gun tomorrow. You can see that. But that doesn't apply to the manufacturer, but it does apply to the Government.

Mr. MEHORNAY. That we should take care of in the delivery schedule. If we know we want guns in 60 days, let's don't give a man 6 months. Let's know that.

Acting Chairman BREWSTER. We have felt that the need has been constantly accelerated, whereas the conditions under which you started 7 months ago are quite different at the present time, so that we are seeking to expedite our entire program. Are we correct in the impression that a substantial percent of the authorizations have not yet been converted into contracts?

Mr. MEHORNAY. That is my information; yes, sir.

Acting Chairman BREWSTER. So that there is a big backlog of potential orders with which you are able to exercise persuasion.

Mr. MEHORNAY. We feel this—that our primary problem is to get all plants, particularly these smaller plants, so organized, so educated, so prepared, to take orders and, on the other hand, to get the prime contractor so educated as to the necessity of spreading that load that when the impact of this some twenty or twenty-three billion dollars hits us, which you and I know will—it is public property; it is in the press—those men will be organized to do it, will be trained to do it, will have had explained away the cobwebs of their thinking that it is so costly, so complicated, that it can't be done, that we will have this field plowed, ready to sow.

Now, we have not been able—and we admit it—to get enough orders for these smaller men to satisfy them, either as direct contractors or as subcontractors. That is our only objective. If we have fallen down there, that is our fault and no one's else. But we have not had the load to do it, and we have had to say, "Please get ready," and they have gotten ready. I think there has been the most tremendous swing in favor of subcontracting and the use of small manufacturers within the last 3 months than there has been within a decade in America, because that is coming on. It is recognized that the Army and Navy in their directives started out 3 and 4 months with the mildest possible reference to small people and to subcontracting. Today the Army has out a directive to its procurement officers that they shall see that their prime contractors do subcontract and that it be arranged at the time of the letting of the contract.

Acting Chairman BREWSTER. How long has that been in effect?

Mr. MEHORNAY. May 20.

Acting Chairman BREWSTER. So that for about 2 to 3 weeks they have been functioning under that?

Mr. MEHORNAY. That has been a direct command to them from the Under Secretary of War.

The Navy, from that same general attitude that it is a nice thing if you like it, and that sort of thing, has come around until they have issued a directive to all of their shore establishments that they shall amend their specifications, that they shall take out of their shore establishments every possible item that can be made commercially within a reasonable distance of that shore establishment. They have in preparation another directive even stronger than that, and the Navy has given us two new types of contracts—a machine and wage-rate contract, and a fixed or spot-price contract, in which we can make—or, rather, they can make prearrangements with the smaller manufacturers as to what they will charge for the use of an individual machine, what they will charge for the use of individual workmen, so that that work can be shot to those men practically instantaneously as it becomes available, and not take up this long, drawn-out Government contract

procedure. They are making very distinct strides on that. I am holding no brief for the Army or the Navy, but I am definitely holding a brief for the preparation with speed, and I am citing these things to you, if I may, sir, to show you that the entire program is being put into operation. We couldn't furnish them these subcontractors unless we had made these surveys, unless we were right out in the field with the people. It can't be done from Washington. A man employing 15 people can't come down here and spend 15 weeks trying to meet 15 people. You just can't do that. We had to go where he is. His facilities are there, he is there, we know him, the Army and Navy men know us, and we know what he can do. It is not completed, I admit you that, but at least the nucleus is there, and we have not yet failed to supply one to the other.

The Ordnance Department in Philadelphia asked us the latter part of last week to get \$38,000,000 worth of contracts arranged for. The small prime contractors and subcontractors asked us to recommend the companies to them for their inspection and adoption and contract, if they approve. They do not turn their orders over to us. I think it is directly and distinctly on the move.

Acting Chairman BREWSTER. How long would you expect before our machine-tool capacity would be used to the goal which you have in view, of 20 hours?

Mr. MEHORNAY. Oh, you will never get to an average of 20 hours.

Acting Chairman BREWSTER. How rapid an increase do you expect we can make from this present 10-hour basis?

Mr. MEHORNAY. I am on the way out now. Four months, I believe.

Acting Chairman BREWSTER. Four months from now you think you can achieve 15-hour use?

Mr. MEHORNAY. Yes, sir.

Acting Chairman BREWSTER. That is a 50-percent increase in 4 months.

Mr. MEHORNAY. That is right.

Acting Chairman BREWSTER. That is a very laudable goal.

Mr. MEHORNAY. I am depending on the load which you know of and the load which you are expecting getting out there. We can't do it unless the load is put out.

Acting Chairman BREWSTER. You mean as now authorized by Congress, or are you assuming the \$9,000,000,000 appropriation for the Army will go through, and so on?

Mr. MEHORNAY. That is nine on top of the forty-one.

Acting Chairman BREWSTER. I think you can depend on that. You realize that the information so far has indicated that we are 25 percent or so behind our rather modest goal of 17 billion for this year.

Mr. MEHORNAY. No, sir; I wasn't informed of that.

Acting Chairman BREWSTER. We are going at the rate of a little over a billion a month now. What were the figures for the first 4 months, Mr. Fulton?

Mr. FULTON. Three billion seven, and with May, the preliminary estimate for 5 months is four billion nine.

Acting Chairman BREWSTER. That is under a billion a month, which would be 12 billion a year.

Mr. FULTON. But we are going at the rate of a billion two now.

Acting Chairman BREWSTER. As against our goal of 17 billion, which would be about a billion and a half a month, we are falling behind every month at the present time.

Mr. MEHORNAY. I wouldn't be advised on that.

Acting Chairman BREWSTER. That doesn't come within your scope?

Mr. MEHORNAY. No, sir.

Acting Chairman BREWSTER. How many plants of the smaller type, which would come naturally within your jurisdiction handling orders under 10 million, would there be that you would be directly concerned with?

Mr. MEHORNAY. I would say probably 20,000, 25,000.

Acting Chairman BREWSTER. That is a lot of plants for 20 men.

Mr. MEHORNAY. Definitely a lot of plants for 20 men. The load is shared, however, with the 36 field offices, in which there are 144 men.

Acting Chairman BREWSTER. I think you said that any contracts over 500 thousand were referred for clearance to the O. P. M.?

Mr. MEHORNAY. Not to my section, but to the O. P. M.

Acting Chairman BREWSTER. To the O. P. M. Whether they would come to you would be dependent on other factors?

Mr. MEHORNAY. No; there would be no factor bringing them to me for clearance.

Acting Chairman BREWSTER. If they were under 10 million, you would get them.

Mr. MEHORNAY. Oh, no.

Mr. FULTON. I think he testified only if the contracting officer of the Army or Navy sends it to him.

Acting Chairman BREWSTER. Wouldn't the O. P. M. refer to you any of those smaller ones?

Mr. MEHORNAY. No.

Acting Chairman BREWSTER. They would simply approve them as they came. Your organization is kept busy all the time?

Mr. MEHORNAY. We think we put in more hours than anyone. Probably we do not accomplish as much, but we work at it.

Acting Chairman BREWSTER. Is there anything else, Mr. Fulton?

Mr. FULTON. Yes. With respect to starting this, what specific instructions and powers did Mr. Biggers give to you?

Mr. MEHORNAY. The Office of Production Management exists, as you know, by Presidential proclamation setting up the Division. Mr. Biggers, by motion in the O. P. M., set up this section, stating that it was to advise all business, specifically the smaller businesses—may I refer here just a minute, if you don't mind—as to business, financial, contract, engineer, production, through a decentralized advisory service.

Mr. FULTON. In addition to instructing you to advise business, what instructions did he give you with respect to advising other departments of the O. P. M.?

Mr. MEHORNAY. None whatever.

Mr. FULTON. And with respect to advising the Army or the Navy?

Mr. MEHORNAY. That we considered a carry-over from the small-business activities, which directly was to advise the Army, the Navy, and the public.

Mr. FULTON. No; I mean not where the Army or the Navy asked you, but what instructions, if any, did he give you to advise the Army or the Navy where they didn't ask?

Mr. MEHORNAY. No.

Mr. FULTON. What power did he give you?

Mr. MEHORNAY. None.

Mr. FULTON. So that in effect you were set up so that if the Army or the Navy wanted to consult you, they could do so, and you could also advise small and big businessmen, but you had no power of any kind?

Mr. MEHORNAY. Oh, no, no power.

Mr. FULTON. Not even the authority to institute discussions of your own hand with the Army or the Navy or even another division of the O. P. M. Is that right?

Mr. MEHORNAY. Well, that is correct, but we make no reservation about talking to anybody on any subject if we think it would advance the cause. You are asking specifically if we have authority to inflict our opinions and our discussions, and that we have not.

Acting Chairman BREWSTER. Have there been any cases where you have felt that subcontracts might have been used advantageously when the Government agencies haven't been inclined to accept your view?

Mr. MEHORNAY. No; we have—if I may for myself clarify the question, I believe you are asking have we ever lost a debate with them?

Acting Chairman BREWSTER. I suppose that is what it amounts to.

Mr. MEHORNAY. Meaning that we had talked on it.

Acting Chairman BREWSTER. Yes.

Mr. MEHORNAY. No; we have never been just thrown out. Now, we do know lots of contracts we think could have been advantageously subcontracted, and didn't hear of or have any part of it.

Acting Chairman BREWSTER. You were not asked to advise on those?

Mr. MEHORNAY. That is right.

Acting Chairman BREWSTER. Have you brought to their attention small concerns who might be able to help who have not been able to get contracts or subcontracts?

Mr. MEHORNAY. Hundreds of them, thousands of them—not hundreds of thousands, but thousands of them.

Mr. FULTON. Do you mean that you have done that specifically, that despite this lack of authorization you have gone to the Army, for example, and specifically said, "This is a matter which we think can be subcontracted," and that you have done that in hundreds of cases?

Mr. MEHORNAY. No; that was not the question; I'm sorry.

Acting Chairman BREWSTER. No.

Mr. MEHORNAY. If it had been I would have answered it in another way.

Mr. FULTON. You just mean that you have given information generally to the Army involving hundreds of different concerns and thousands of different concerns?

Mr. MEHORNAY. That is right.

Mr. FULTON. But have you specifically ever gone to the Army and said, "This is an article which our study indicates can be subcontracted"?

Mr. MEHORNAY. Yes.

Mr. FULTON. And has that been done in hundreds of cases?

Mr. MEHORNAY. No.

Mr. FULTON. In how many would you say it has been done?

Mr. MEHORNAY. A limited number. That would require a technical, analytical staff at Washington with which we are not equipped. We have four very competent men on that particular phase, but there are thousands of items to be studied. We could not undertake them. We have undertaken two major items and have worked those through, but that is not a general practice, and the two do not prove anything. We are in a defense preparation of billions, and two means nothing.

Mr. FULTON. So that you could say that it is not part, really, of the function of your division—

Mr. MEHORNAY. No.

Mr. FULTON. To point out to the Army or the Navy, or the O. P. M., the other divisions of the O. P. M., that this, that, or the other article could be subcontracted.

Mr. MEHORNAY. It is not a delegated duty to us.

Mr. FULTON. Nor one which you have assumed.

Mr. MEHORNAY. Nor one which we have assumed as a duty. We work very loose down there, and everybody is in everybody else's affairs, but as a duty and as an assignment it does not exist.

Acting Chairman BREWSTER. You suggested a little facetiously that you had plenty of surveys, but I am impressed that the information as to this 50 percent idle machine-tool capacity comes from a purely private agency.

Mr. MEHORNAY. That is correct.

Acting Chairman BREWSTER. Is it possible that there was no Government agency that was fitted to accumulate that information in your surveys?

Mr. MEHORNAY. There is no Government agency that I know of that has undertaken it in any way.

Acting Chairman BREWSTER. The Department of Commerce has no facilities, as far as you know?

Mr. MEHORNAY. I would think not; as far as I know they do not have. The Army and Navy Munitions Board has a survey. They do have the machinery, but as to whether or not they are idle or running, there is no record.

Acting Chairman BREWSTER. That is the point which we have; that is, it isn't of particular importance to know the machines unless we know whether or not they are being used or idle. And the significant thing this morning is that the information comes to us from a private agency that 50 percent of the machine-tool capacity of this country today is unutilized after 1 year after we started this major defense effort making increasing billions available throughout this last year, and it has been only within this past week that instructions have been issued to carry this subcontracting to a point that might really accomplish something. That is the startling and disturbing thing. Now whether or not there is a duplication here in our building machine tools when we have 50 percent of our existing capacity unutilized is a question which I understand you don't want to testify about, but that, too, invites comment from some responsible agency, as you will see.

The reason for your existence is to get this idle capacity utilized, and it is startling to us to find that you are dependent entirely upon being asked for your opinion. You have been very gentle in your comments, but there certainly is indicated a lack of integration of our

effort, as it would appear from the evidence developed here today. Do you see why that would be so in any well-organized industry, that whether or not you are approached in any given case apparently depends upon the judgment of some officer who may not care to be interfered with in the exercise of his authorized function?

Mr. MEHORNAY. That is correct.

Acting Chairman BREWSTER. That is quite right, isn't it? If he thinks you are a little too intrusive, that you volunteer a little too much advice, your telephone probably won't ring, isn't that right?

Mr. MEHORNAY. That is correct.

Acting Chairman BREWSTER. So that you have really a very delicate situation as to whether you will go and volunteer advice to the Army and the Navy or whether you will sit back and wait for them to come around. I suspect that such a condition doesn't exist in Germany at the present time. Don't you agree with that?

Mr. MEHORNAY. I would agree with that; yes, sir.

Acting Chairman BREWSTER. I think so. I don't believe that they have quite that looseness of functioning.

I think that this covers fairly well what we planned to bring out this morning from your division. We certainly appreciate very much your coming in, and the frankness and fairness with which you have reported your function and where your plans have arrived at conclusions that are going to help get us ready.

Mr. MEHORNAY. There are one or two things, if I might make an observation, sir.

Acting Chairman BREWSTER. We would be very much interested.

Mr. MEHORNAY. We are hedged about—I say “We,” I mean all of us involved in this preparation—by Army and Navy tradition of competitive bidding on all items.

Acting Chairman BREWSTER. You needn't lay that to the Army or the Navy because the Congress has imposed it. We have been educating them to that for a good many years, so that they are really not fully to blame.

Mr. MEHORNAY. I appreciate the courtesy of your interjecting that into my statement; it will save me some explanation. But as long as you do that and leave the low-margin producer the pacesetter, we are going to be able to get this work spread. It is going to continuously be taken by these other people. Then when that person has to subcontract, he is not going to be able to subcontract successfully because the price he can pay for subcontracting will not be a price that can be accepted by the marginal producer.

Acting Chairman BREWSTER. The General Motors can build a car cheaper than we can up in a machine shop in Dexter, Maine.

Mr. MEHORNAY. I am afraid so.

Acting Chairman BREWSTER. That is, of course, very obvious.

Mr. FULTON. But also, it is aggravated, is it not, by the fact that if you build a new plant, say, to produce the article, you are amortizing under the present method of 20 percent per year; you in effect, in order to find your average cost in this particular program, for the Government's purposes anyhow, ought to include in the cost of manufacturing the article the cost of amortizing the plant. Couldn't we afford, perhaps, in the subcontracting, to pay a little bit more to the people who weren't in effect obtaining a little bit more through the amortization?

Mr. MEHORNAY. It can't be included in the price of their product and get the amortization.

Mr. FULTON. No; the small plant isn't getting the amortization anyhow.

Acting Chairman BREWSTER. Oh, no; he means can the big plant include the amortization in the cost.

Mr. FULTON. No; but the big plant in bidding—perhaps I had better make it a little more clear what I had in mind. Suppose you have a man who builds a plant for a million dollars, and when he gets it built you produce articles at, say, \$10 each, but that \$10 includes no part of that amortization of the plant cost, and actually before the Government is through in the course of the amortization program that million-dollar plant is completely paid for in 5 years out of tax savings. Now, as distinct from that, suppose you don't have to obtain plants at all; they get nothing whatever out of the amortization. Their charge may be \$11 an item. But what I was talking about is if you build a plant for a million dollars, which wouldn't otherwise have to be built, shouldn't you include the cost, that capital cost of constructing a new facility, as a part of the cost of the article? And if you do that, don't you find, in fact, that you can afford to pay a little more?

Mr. COTTON. The tax law passed by Congress won't allow you to do that and get the amortization you are talking about.

Mr. FULTON. But isn't it true that that plant of a million dollars is paid for out of the Government orders before we are through? It is new facilities which in addition have to come out in the production. It doesn't come out of thin air.

Mr. COTTON. The law says that if you are reimbursed in excess of normal depreciation you are not entitled to special amortization. I don't of course, speak of the facts. But that is what the law says.

Mr. FULTON. How would that apply with respect to a plant built for a defense article at the end of 5 years? Isn't that plant in effect free and clear at the end of a 5-year period, even though it is in excess of depreciation, because the theory is that it depreciates, as far as its usefulness goes, and it is an obsolescent plant at the end of the emergency period?

Acting Chairman BREWSTER. That isn't so.

Mr. FULTON. Isn't it, Senator, in the sense that the plant is no longer considered useful because it is built for a purpose that is now gone?

Acting Chairman BREWSTER. I don't think they have recognized obsolescence to that extent, have they, Mr. Cotton? You can speak better than I can, I believe. The 5-year program doesn't contemplate that the plant is worthless at the end of that time, does it?

Mr. COTTON. I don't know. The 5-year period was adopted. They were allowed to amortize the whole cost over 5 years.

Acting Chairman BREWSTER. That is for tax purposes.

Mr. FULTON. To the extent that you have earnings, Senator, you could deduct 20 percent of the value of the plant, could you not, each year? It means that the plant has cost you nothing at the end of 5 years. Of course, it has a value.

Acting Chairman BREWSTER. If you deducted that from your profits, that is for tax purposes.

Mr. FULTON. But these other subcontractors cannot make such deductions from profits, and to the extent that the Government could thereby obtain greater tax income from the subcontractors it could afford to pay the subcontractors slightly greater original cost.

Acting Chairman BREWSTER. Do you have a legal adviser, Mr. Mehornay?

Mr. MEHORNAY. Mr. Cotton.

Acting Chairman BREWSTER. Well, I think Mr. Cotton had better advise you; I think we recognize it is rather complicated. I think Mr. Fulton has a suggestion as to whether that might afford you some degree of latitude in this matter of costs which you were mentioning. We interrupted you, and I don't know whether you had completed your statement about the difficulty in subcontracting resulting from the efficiency of the large producer, which doesn't permit him to get equivalent results from the smaller producers who are unfamiliar with the work.

Mr. MEHORNAY. That is right.

Acting Chairman BREWSTER. That is what you were addressing yourself to.

Mr. MEHORNAY. And to add that I definitely think that there should be some sort of an equal situation for a man who uses subcontractors and takes on the marginal producer and brings him into the picture, and not have to take it out of his own hide to do it. That is the only way we are going to be able to get them all into the picture.

Acting Chairman BREWSTER. Did the law which we adopted permitting the revision of contracts in the interest of expediting them, have enough latitude to allow that to be done, for instance?

Mr. MEHORNAY. In the matter of the Army?

Acting Chairman BREWSTER. Yes.

Mr. MEHORNAY. It did, and they are calling in their contractors one at a time. I will say—they have many officers with which to do it—and are exploring the possibility. The Ordnance Department, particularly, is now adjusting a considerable number of contracts—each individual contract; there is no blanket adjustment.

Acting Chairman BREWSTER. Yes; according to the circumstances.

Mr. MEHORNAY. According to the circumstances, and are shortening their deliveries, are paying bonuses, if it is permissible to use the word.

Acting Chairman BREWSTER. Yes.

Mr. MEHORNAY. The Navy denies that they have any such privilege.

Acting Chairman BREWSTER. They don't recognize that they have the authority to do that.

Mr. MEHORNAY. That is the statement made to me by them.

Acting Chairman BREWSTER. Have you examined that, Mr. Cotton?

Mr. COTTON. No, sir.

Acting Chairman BREWSTER. That involves a bonus to expedite delivery by subcontracting coupled with a little persuasion that we will give you some more work later on. You feel that during this emergency we must continue to proceed with a modified bidding program.

Mr. MEHORNAY. Except, sir, for the phrasedology. I am afraid a question would be that I am in favor of abandoning competitive bidding.

Acting Chairman BREWSTER. I said modified.

Mr. MEHORNAY. A modified competitive bidding can very simply be done if we will include in every bid call a provision that is used by some of the services now, that that bid is subject to further negotiations pending the final contract. You keep the matter open; you can bring your 1 to 10 lowest bidders in, and you can make such adjustments as you please, arranging for your subcontracting, arranging for your materials, arranging for machinery, and when a man tells you that he needs a whole factory full of machinery and the other man has the machinery ready to go, even though he be a percentage higher, the other should be given that order and paid that difference and allowed to proceed. You can't stay on the lowest responsible basis and get that done.

Acting Chairman BREWSTER. Do you feel that the Government can protect itself against abuse in that situation?

Mr. MEHORNAY. I think it can. I think any procurement officer who would take the full responsibility of doing that would be cutting his own throat, if I may use that expression, but if adequate review boards could be set up, a pool of reviewers, those men rotated on the review so that you would never know who was going to pass judgment, there are plenty of qualified, competent men in America to do that, not including me, and every one of those could be reviewed and could be substantiated. There are thousands of them, that is true, but this is that kind of an effort.

Acting Chairman BREWSTER. You feel that wouldn't unduly delay the functioning of the program?

Mr. MEHORNAY. No.

Acting Chairman BREWSTER. And that in that review you would have protection against possible abuses of individuals who might be unduly influenced by improper consideration?

Mr. MEHORNAY. I think I would be willing to take that chance; yes, sir.

Acting Chairman BREWSTER. That is a very interesting suggestion, and I presume results from your experience in the last 7 months in observing this situation.

Mr. MEHORNAY. That is correct. I have not been involved in Army procurement work or observation before.

Acting Chairman BREWSTER. Does that complete your comment that you wished to make?

Mr. MEHORNAY. That was the comment on that part of it.

Acting Chairman BREWSTER. That is very interesting.

Mr. MEHORNAY. There are many more points of that that I would like to take up with you personally.

Acting Chairman BREWSTER. We will not detain you further, and we will at any time be glad to hear from you with any suggestions.

We will resume on Thursday morning at 10:30 in this room. The Under Secretary of War and the Under Secretary of the Navy will be the witnesses at that time.

(Whereupon, at 12:32 p. m., a recess was taken until 10:30 a. m., Thursday, June 12, 1941.)

INVESTIGATION OF NATIONAL DEFENSE PROGRAM

THURSDAY, JUNE 12, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING
THE NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:40 a. m., pursuant to adjournment on Tuesday, June 10, 1941, in room 104, Senate Office Building, Senator Tom Connally presiding.

Present: Senators Tom Connally (acting chairman), James M. Mead, Ralph O. Brewster, Joseph H. Ball, and Mon C. Wallgren.

Present also: Senator Allen J. Ellender; Hugh A. Fulton, chief counsel; Charles P. Clark, associate chief counsel; Rear Admirals Ray Spear, Quartermaster General; S. M. Robinson, Chief, Bureau of Ships; W. H. P. Blanding, Chief, Bureau of Ordnance; Capt. E. D. Army, Shore Establishments Division; and Commander M. L. Ring, Bureau of Supplies and Accounts.

Acting Chairman CONNALLY. The committee will come to order. Secretary Patterson, will you take the stand?

TESTIMONY OF HON. ROBERT P. PATTERSON, UNDER SECRETARY OF WAR

Acting Chairman CONNALLY. Mr. Secretary, the committee has been undertaking to explore and inform itself about the utilization of all the existing manufacturing plants and machine tools and other utilities connected with the production of national defense articles, munitions, and ships, and all that sort of thing. They are aware of the fact that you have been making efforts along that line, and so they would like for you to tell us briefly your views and what is being done, if anything, toward getting the maximum results from the utilization of these instrumentalities.

IMPORTANCE OF SUBCONTRACTING IN DEFENSE PRODUCTION AND OF UTILIZING IDLE MACHINE CAPACITY

Mr. PATTERSON. The prime policy of the War Department has been to control the entire industrial power of this Nation toward the production of armament and munitions. At the outset, roughly a year ago, our first orders were placed. They were placed in accordance with the industrial mobilization plan which had allocated industries, particularly industrial concerns, to the various supply arms and services in cooperation with the Navy Department. Subcontracting was

not particularly stressed by the War Department at the time, the point being to get the orders out as fast as possible and to leave it to the contractors themselves to avail themselves of the industrial facilities through subcontracting. It was done to a great measure particularly in the aircraft industry. We followed it up from time to time and put more and more stress upon the necessity of subcontracting as the munitions load grew.

I have here copies of some five directives put out by the War Department to the supply arms and services, or by the supply arms and services themselves, emphasizing the importance that subcontracting might play in the production efforts.

Acting Chairman CONNALLY. If you like, they may go in the record.

(The documents referred to were marked "Exhibits Nos. 68, 69, 70, 71, and 72," and are included in the appendix on pp. 1473-1479.)

Mr. PATTERSON. Yes, sir; and I would like to call particular attention to one of May 20, 1941,¹ which I think the committee might be particularly interested in. It is the one where we pressed the policy in the most emphatic way, and pointed out to our supply arms the detailed procedure to be followed. I think Mr. Fulton has seen that; I don't know that the committee has.

Mr. FULTON. Yes, Senator Connally; I particularly call your attention and that of the committee to the last two parts (c) and (d), in which the Army has in effect required that there be a study to make certain that subcontracting is fully used before any new facilities are to be used, and (d) where they have required that there be an examination to determine whether there is a possibility of making more prime contracts and thereby subdividing the work.

Acting Chairman CONNALLY. I will read those paragraphs, the last three paragraphs, in the directive of the date of May 20, 1941 [reading from Exhibit No. 68]:

Contracting officers will furnish copies of such lists to the appropriate district procurement office, with a view to carrying out (a) above—

That refers to a prior paragraph. (Continuing:)

(c) New facilities be not authorized without due study of the alternative of utilizing fully the existing facilities of prime contractors or facilities available through subcontracts.

(d) Procurement agencies examine the possibilities of breaking up orders into smaller contracts when production can be expedited thereby without detriment to quality requirements.

Signed by the Under Secretary of War.

I think that is a very good statement, Mr. Secretary. That can go in the record.

Mr. PATTERSON. I think that subcontracting is more prevalent than is generally appreciated. The Ordnance Department tells me that in placing some 1,400 prime contracts in a period prior to May 16, 1941, there were 21,000, or nearly 22,000, subcontracts resulting from those prime orders, and that does not count innumerable subcontracts which have not been determined or recorded, but those are the ones reported by the contractors.

Now, we have had various suggestions made to us about further subcontracting and further methods to attain it, very well meaning meas-

¹ Exhibit No. 68.

ures, but impracticable. It has been suggested, for example, that in our contracts we put a requirement that this contractor must let out on subcontract 60 percent of this order. No such rule of thumb as that can possibly work.

Acting Chairman CONNALLY. I agree with you on that.

Mr. PATTERSON. And I think that the proponents of such measures, after rather thorough and calm discussion, have conceded that that is impossible of attainment. Some jobs cannot be subcontracted at all; other jobs are capable of subcontract to the extent of 90 percent. I had an interesting instance of that when we were making plans for the heavy-bomber program in which the automobile companies were to cooperate. We had contracts for heavy and medium bombers with the Martin Co. and the North American Co., Consolidated Co., and the Douglas Co. Under each of these arrangements automobile companies were to make the parts and do the subassemblies. In arriving at the fair fee to be paid these people for their work which was let on a fixed-fee basis, we had a variety of estimates, of course, the automobile people claiming that the percentage of the total work to be done by the parts and subassemblies was high, and the aircraft people, who were to do the assembling, whittling down those estimates and claiming that their part of the work had been minimized. However, all of them agreed that the automobile companies which were to do the parts work and the subassemblies were to do more than half. That was conceded by the aircraft companies, that more than half of the total man-hours put into that effort would be performed by the automobile companies.

Acting Chairman CONNALLY. Of course, as a rule the prime contractor doesn't want to subcontract if he thinks he can do it with his own existing facilities. That is true, isn't it, as a rule?

Mr. PATTERSON. It is frequently true. The subcontracting system is something of an art in itself. Now, we have an instance of a company, a very important contractor of ours, that makes scientific equipment, fire-control apparatus, that 2 years ago, or thereabouts, started in to pursue a system of thorough subcontracting. They had to educate their subcontractors; they had to build up carefully a staff of trained men who could size up a job and decide what they should do themselves and what they should let out. They have been very successful at it and have let out a great deal of work. The average company that had not put in the hard work and the resourcefulness that that company did could not do that overnight. I made a fair study of their system and was very much impressed by it. I think Mr. Fulton may have studied that case. They have quite a section of their managerial staff that just get after that problem, and it has been carefully built up and works very well.

Acting Chairman CONNALLY. On the other hand, the more you disperse it the more danger you run of tie-ups, don't you? In other words, instead of having one plant, you have got a dozen tied up.

Mr. PATTERSON. It is beyond the contractor's control.

Acting Chairman CONNALLY. The tie-up of any one of those subcontractors slows up, of course, the whole program.

Mr. PATTERSON. Well, we do have instances reported where we are getting after people who make aircraft for us, and they say, "Well, we are in arrears, that is true, but a fellow up in Cleveland who is making an indispensable part for us is in arrears and he holds up the procession."

Acting Chairman CONNALLY. Has there not been made a survey of these available facilities of all kinds, including machine tools? That information is pretty well available, isn't it?

Mr. PATTERSON. The O. P. M. has a great deal of data on that.

Acting Chairman CONNALLY. I had a letter from a man the other day. I wanted to bring it down here, but I couldn't put my hands on it for the moment. I think it was from Chicago. He claimed that his concern had available a lot of machine tools that could be utilized, but were not being utilized. I will turn that over to the committee.

Mr. PATTERSON. I think it is fair to point out to the committee that extreme pressure by us put upon further subcontracting may cost money, while we are educating concerns in the production of parts for munitions.

Acting Chairman CONNALLY. I can understand that.

Mr. PATTERSON. It may be more expensive. That is a matter of interest. However, I believe that if a greater productive effort in volume may be thereby attained, the extra expense may be justified.

Acting Chairman CONNALLY. The committee had that matter up some days ago, and I took the liberty of suggesting that the speeding up of the program in a plant through the process of subcontracting might involve the question of a little bonus or something of that kind to produce the article in advance of the time for delivery.

Mr. PATTERSON. That has been pursued in England, and that is what they call the target plan, whereby they get a bonus for acceleration and penalty for retarding.

Acting Chairman CONNALLY. That is right, because if as a result of those processes we get the stuff more quickly, the added expense is justified, that is, I mean within reason the expense would be justified. That is what you had in mind, wasn't it?

Mr. PATTERSON. I think so. That is the only justification for these fixed-fee contracts we have been making. I hold no brief for them under ideal conditions. There is again the question of speed, which in certain items is of even more importance than economy, in my opinion.

Senator BREWSTER. Have you the authority to modify your contracts to encourage subcontracting?

Mr. PATTERSON. The power to do it?

Senator BREWSTER. Yes; legal authority.

Mr. PATTERSON. We don't reserve that in the contract. We could do it only by a change order.

Senator BREWSTER. I am not speaking now of your dealing with the contractor, but as far as the Government is concerned, if a contractor came in and said, "We could get a lot of these parts from a subcontractor, but it is going to cost us a little more than we had reckoned," would you have the legal authority to modify the contract to that extent?

Mr. PATTERSON. We could do it, no question.

Acting Chairman CONNALLY. The power to make the contract evolves that.

Mr. PATTERSON. We can bring about any course of conduct on the part of our contractors that we think most effective.

Senator BREWSTER. But what I had in mind is, of course, that it isn't always feasible in the speed with which you are operating to have the question of subcontracting determined at the time of the prime

contract. I mean you can't anticipate. We have been accelerating so rapidly. Now unless you have the power to modify contracts to encourage that subcontracting, it seems to me you are going to be greatly handicapped.

Mr. PATTERSON. Whether we would have the legal power to coerce the contractor into that is not decisive, because we have the actual power, and if we told them to do it, they would do it all right. There is no doubt of that. They would be giving us warning of their views at the same time that they didn't think it would promote the efficient performance of the contract.

Senator BREWSTER. Would it be feasible to have a clause in future contracts which would contemplate that possibility?

Mr. PATTERSON. I don't see any necessity of it, Senator, because we can do that; we could bring that about at any time. We have control, real control, over these contractors. There is no doubt of that. If we gave them a peremptory directive to do something they would do it.

Senator BREWSTER. We had here Tuesday the National Industrial Council and the O. P. M., and they both agreed that 50 percent of the machine-tool-industry capacity of the country was still unutilized, which is rather staggering, after a year of this effort, and it obviously was the result of not being able to use all of the smaller plants with so much of your defense contracts placed; unless you have a certain latitude of procedure from day to day, it seems to me it is going to be very greatly slowed down.

Mr. PATTERSON. We got a very sound directive from the White House on that a month or so ago, which emphasized the placing of the business where possible where the tools were.

Senator BREWSTER. Yes.

Mr. PATTERSON. But if that couldn't be done, bring the tools to the job. Now, that seems to me to summarize the whole situation, and it is a question just of applying those rules.

Senator BREWSTER. How do you feel about this 50 percent idleness? Is that in accord with your own estimates?

Mr. PATTERSON. I have no idea. I would take their word for it.

Senator BREWSTER. We were startled, in the first place.

Mr. FULTON. That was 50 percent idleness of the smaller plants.

Senator BREWSTER. It was 50 percent idleness of all covered by the survey.

Mr. FULTON. Eighteen thousand plants.

Senator BREWSTER. That is right.

Mr. PATTERSON. I don't think that we can accept that figure.

Acting Chairman CONNALLY. The Counsel said it only applied to a certain number of plants so it wasn't the whole thing.

Mr. PATTERSON. For instance, we have this to consider. We had a case up with one of the producers of airplane engines. That producer produces automobiles too, allied companies do. They were short of tools, and we said, "Go out and get the tools out of the automobile shop," and they said, "The differences in tolerances render only about 10 percent of our tools in the other shops available for this kind of work, and the tools we need the most we just haven't got." It takes a different machine altogether to produce airplane engines from what it does automobile engines.

Acting Chairman CONNALLY. Judge Patterson, it is very easy to say, "Why, of course, get hold of the machine tools wherever they are,

out of everybody's factory, and put them to work," but there are a lot of practical difficulties in doing that.

Mr. PATTERSON. There are different kinds of tools. We talk of them roughly as tools.

Acting Chairman CONNALLY. One man has a little plant and he is setting there hoping to get a contract or hoping to get a subcontract, and he doesn't want to give up his machine tools to some other concern. It is very easy to say, "Why, yes, let's just get everything together and do it." But doing it and talking about it are two different things.

Mr. PATTERSON. And the machine tools aren't like apples in a barrel.

Acting Chairman CONNALLY. That is right.

Mr. PATTERSON. I have another case. I mentioned one to show the extent to which subcontracting is already prevalent. We have a concern making machinery for small-arms ammunition, the production machinery to make the small-arms ammunition; that is a prime contract of some \$11,000,000. Eight and a half million of that is out on subcontract. That company couldn't possibly produce that machinery for us. They have got to put it around. I was informed last fall by the Pratt & Whitney Co. up in Hartford, not the machine-tool company but the airplane engine company, that they had over 700 subcontractors, and they were worried more or less about the ability of those subcontractors to continue deliveries when some of the new engine manufacturers who had been started off last fall came on those same subcontractors with their demands. They said, "What's going to happen?"

We are pressing it for all we are worth.

Senator BREWSTER. I want to pursue this matter of machine tools a little further. In the evidence on Tuesday, which the other members were not privileged to hear, the first thing which startled me was to find that the survey as to idle capacity of machine tools was made by a private organization, the National Industrial Council.

Mr. PATTERSON. I think the National Association of Manufacturers has made some in some States, too.

Mr. FULTON. That is the same survey.

Senator BREWSTER. That is the same thing. If that were the instrumentality used by the Government, why, of course, it is all right, but it was a little startling, in the first place, with all of the gigantic organization we have here, to find that a private organization was apparently the only one that had even a pretense of information as to whether or not the existing machine-tool capacity of this country was being utilized.

Mr. PATTERSON. I think by cooperative effort on their part they were probably the best to do it.

Senator BREWSTER. That is all right. Now, we follow along to the O. P. M., who agreed with these figures, that 50 percent were idle. That is on an estimate they gave us that a machine tool might be used 20 hours out of 24, and that on that basis, while, as the counsel pointed out, this covered 18,000 plants, yet it covered a Nation-wide survey and we were unable to find any reason that it might not be an accurate picture of the situation that prevailed. If it isn't accurate, we, of course, want to know it. He emphasized that you had a surplus of sur-

veys, 60,000 cards and tremendous duplication in your records—the Army, the Navy, the O. P. M.—which resulted in a great deal of overlapping and duplication.

This directs itself to the fundamental issue about which we discussed when you first came before our committee and about which, as you know, some of you feel very keenly, whether we are accomplishing as rapidly as possible that complete coordination contemplated in the industrial mobilization plan. This seemed possibly a glittering example of a certain lack of coordination in that regard.

Mr. PATTERSON. Of course, the Munitions Board, the Army and Navy Munitions Board, has a machine-tool committee.

Senator BREWSTER. Yes.

Mr. PATTERSON. And they have, as I understand it, an inventory now of the tools in some 20,000 plants.

Senator BREWSTER. That is right, but they have apparently no record as to whether or not those are being used. That was the evidence before us on Tuesday, and the only evidence was the survey of the National Industrial Council, which showed 50 percent unutilized capacity. Now that, we feel, or I feel, indicates that we haven't progressed as rapidly as we might hope.

Now, about the matter of machine tools, we found here that according to the evidence, there are 30,000 general-purpose machine tools under manufacture in this country today, utilizing a tremendous amount of productive capacity. At the same time, that 50 percent of existing tools is unutilized. I assume that possibly this has been brought to your attention since Tuesday, because it was a thing that we went into very thoroughly on Tuesday.

Mr. PATTERSON. I heard that estimate a month or two ago from the N. A. M., at least it was an estimate, I think then, of the State of Illinois that they had selected. Everyone recognized, however, that that was not a complete picture, that it didn't take into account the age of the tools, the kind of tools, or it did not mean, in other words, that you were only using 50 percent of what was available. I think the N. A. M. themselves conceded that.

Acting Chairman CONNALLY. Right there let me interject that I think it is quite fair to state that this survey that was submitted was not of the entire tool industry of the country, but it was only the tools in the smaller plants, 18,000 of them, and even if 50 percent of those tools are not being utilized, it doesn't mean that 50 percent of the whole machine-tool industry of the country is not; it might be 20 or 25. I think in fairness to you that that ought to be stated for the record.

Mr. PATTERSON. You take these new plants like the Allison Engine Works. They have all the tools they need for most of their work, but they have got some hundred or two hundred critical tools they need and they are short of; they just haven't got them; they aren't in existence, so they tell me, and they have got to await their production, and the rest of the line is held up until they are supplied. And this 50-percent excess over in the State of Illinois does them no good whatsoever, because they aren't the right kind of tools.

Senator BREWSTER. My comment regarding the manufacture of new tools was addressed solely to the general-purpose tools.

Mr. PATTERSON. Our standard universal tools.

Senator BREWSTER. That is right, and that was 30,000 of those under manufacture, according to the report of O. P. M. at the time when O. P. M. presented these figures here on the results of this survey, which was somewhat more comprehensive than the Senator from Texas has indicated, because it was a Nation-wide survey conducted, I assume, in cooperation with all agencies concerned, asking for a complete inventory of machine-tool utilization. They addressed this to the entire country and asked each state to accomplish this. It is true that their results were limited to 18,000 plants, but those were of all sizes. They were not restricted to the smaller plants, and we had nothing to indicate that it was not a fair picture; it may not be, but we had no evidence to indicate it wasn't, and, as I say, it was rather startling.

Mr. PATTERSON. Wasn't that 50 percent on the basis of each tool going 24 hours a day?

Senator BREWSTER. I previously stated that it was 20 hours, because the original report to us was 60-percent idleness, but the O. P. M. expert said that he figured you could only use the tools 20 hours, and the evidence showed that the tools were being utilized about 10 hours, which is 50 percent, so that it did take into contemplation 4 hours of rest for the machine-tool repairs, and so on.

Acting Chairman CONNALLY. Well, even then, conceding what the Senator from Maine says, it doesn't necessarily follow that that reflects the actual picture, because there are all kinds of machine tools, and one machine tool might not be needed at all for a lot of these productive capacities. If you want a hole, why a scoop won't do the job. I think it is quite unfair to say just that we have 40,000,000 machine tools and half of them are not being used. Probably a large percentage of them wouldn't be used in any event, and these new ones that they are manufacturing are possibly machine tools of a type that are needed in particular production plants and which they haven't got and they can't go out and just requisition them just as a machine tool and grab them, no matter who has them or where they are, because the owner may want to keep them himself.

Mr. PATTERSON. Well, we have working on the problem the machine-tool crowd of the Army and Navy Munitions Board, the supply arms themselves, like the Ordnance Department, the Air Corps, and I have no doubt people of that equivalent in the Navy, and then we have the O. P. M. Those are not scattered efforts; they are working in combination. They are pretty able people, and I have confidence that they are doing their best. It is a kind of baffling problem to get perfection out of the use of a tool.

Acting Chairman CONNALLY. May I ask you a question?

Mr. PATTERSON. I must say I have given a lot of thought to it. I have stated my ideas on paper in directives. If we had a state of perfection I suppose we would have a vast force of 100-percent efficient production engineers, industrialists who understood all phases of industrial production, who would go right over the country to all of the plants and would make a study comparable to what has been done by the company I mentioned a few moments ago that are producing fire-control instruments, and so forth, and I suppose that would be better than what we are doing, but it is a hard thing to do and we haven't got the people, and I don't know whether the country has the people that could do that 100 percent.

Acting Chairman CONNALLY. Mr. Secretary, wasn't a lot of that work done even prior to this emergency under the former industrial plan under Assistant Secretary of War Johnson, encouraging manufacturers to look ahead and to get machine tools, and didn't the Government subsidize some of these plants?

Mr. PATTERSON. By means of educational orders.

Acting Chairman CONNALLY. And things of that kind to do the very thing that we are trying to do now.

Mr. PATTERSON. Yes, sir; a start had been made on that as early as 1937.

Senator BREWSTER. I think that the Senator from Texas is as unduly sensitive about the possible functioning of the War Department as I am enthusiastically in favor of everything possible that can be done.

Acting Chairman CONNALLY. I am, too, for that matter, but I don't think it necessarily follows that if they are not working 100 percent efficiently they are not doing their best.

Senator BREWSTER. I understand the function of this committee to be helpful and constructive, and that is what I think we have addressed ourselves to. The thing that I want to focus your mind upon as much as possible is that we are both—all of us here, I guess—amateurs in industry.

Mr. PATTERSON. I am.

Senator BREWSTER. Yes; I am, too.

Acting Chairman CONNALLY. I am an amateur in a lot of things besides industry.

Senator BREWSTER. The O. P. M. indicated that they said almost facetiously that they had a lot of surveys, they were overstocked on surveys, they had a surplus of surveys, but they lacked integration, and the fact that you are unable to tell us whether or not this report of the National Industrial Council and of the O. P. M. is correct indicates that. It was their honest conclusion, as a result of all their studies, that we had a 50-percent idle capacity, and the O. P. M. man further said that he hoped and expected within 4 months with proper cooperation to increase that to 75 percent. That was his evidence. I believe that the Army and the Navy and the Army and Navy Munitions Board, the machine-tool groups and all of them, from what we have received, have not yet achieved that integration which is essential in order to inventory these machine tools and know that they are being used. As I understand you, you don't know whether that is a fair picture or not. The Senator suggests some reasons why they may be fair or may not be fair, but I can't testify to that. The significant thing to me is that no responsible official of the Government knows that is the case.

Acting Chairman CONNALLY. I don't think that is a fair statement at all.

Mr. PATTERSON. Neither does the N. A. M. know. It was their estimate.

Senator BREWSTER. That is right; but the fact that an outside organization, a private organization, apparently possesses more information than is possessed by the responsible officials of this Government at the present time is what gives me concern.

Mr. PATTERSON. I don't believe that is true.

Acting Chairman CONNALLY. I don't think that is a warranted statement at all. The testimony here is that the O. P. M. had the information; if that is not a Government agency, I don't know of one, and the fact that they utilized the information that some private agency has got seems to me a very sensible thing to do instead of going out and making another survey, and I don't think that statement is warranted at all. Where would you get this information except through private sources? Would you go around and see every manufacturer? The Manufacturers' Association has already got the data and the estimate. What would be the sense of sending a flock of Army officers all over the United States to make another survey? I don't think the Senator from Maine is quite fair.

Mr. PATTERSON. It is my information that a complete inventory of all the machine tools produced by the machine-tool manufacturers for quite a number of years back is in our possession.

Senator BREWSTER. Yes; we understand that. The question that concerns the country is whether or not they are being utilized, and on that you do not apparently have the information.

Mr. PATTERSON. Of course, they are not being utilized fully.

Senator BREWSTER. Well, the question is, how much are they being utilized. Are they being utilized as far as is feasible? Your directive of May 20, I think, is admirable. My only regret is that it wasn't issued 6 months ago.

Mr. PATTERSON. I had some other directives issued. They were not as explicit as that one, that is all.

Senator BREWSTER. What steps will be taken to insure that the implications of that directive are carried out?

Mr. PATTERSON. Well, we will have to do that by going around to our various ordnance district offices. That is where the load is placed for the performance of those jobs, and the Ordnance Department will just follow it up with their district offices.

Acting Chairman CONNALLY. You have some system of following that through?

Mr. PATTERSON. Yes; that is true. Of course, we do that on all phases of procurement in the ordnance district offices.

Senator BREWSTER. It does mean considerable added burdens on the local officials, does it not?

Mr. PATTERSON. In the district offices?

Senator BREWSTER. Yes.

Mr. PATTERSON. Yes; it does.

Senator BREWSTER. To do that it is going to mean blazing new trails.

Mr. PATTERSON. They have a lot of people in those district offices. They are well staffed. There are as many as 500 people in one Ordnance office.

Acting Chairman CONNALLY. That is what they are there for, to do things like that.

Mr. PATTERSON. That is right.

Senator MEAD. Mr. Secretary, isn't this a case of a rapidly expanding defense program which, as it accelerates, requires the officials of the Government to penetrate or to explore new production possibilities? In other words, if we go back to the beginning of this defense program, we can realize that an appropriation bill was passed of

rather modest proportions in comparison with the last estimate. There were plenty of available plants, and the War Department, Navy Department, and O. P. M. officials had a very easy task of giving out those contracts in almost a day. Those appropriations increased by leaps and bounds until we found that every big plant in the country was just overwhelmed with production contracts that they couldn't get out in '41 or '42. So then an expansion of the program was required.

I think the estimate of the idleness of plant facilities and machines that was mentioned by the Senator from Maine is reasonable and in line with what is really the record. I went over that privately with representatives of the national and the State manufacturers' associations; I have lived with the small business program for the last 4 or 5 years. I know, as a result of a concrete illustration, what the possibilities are in that field. For instance, in our State we have just recently created a State department of industry and commerce. I don't recall the name. They had business clinics all over the State, and the number of subcontracts agreed upon by prime contractors and the number of idle plants that were ready and willing and had the machinery and the workers to do that job was astounding. In the Buffalo area alone it ran over, as I recall, 260 subcontractors who had heretofore been ignored, who had the men and machines and everything else, and all it required was a medium whereby the prime contractor and the subcontractor could get together in a clinical study of the situation.

The matter was brought home to me again by an appeal made by a Governor for the location of idle machines, and there isn't an idle machine that might be called worthless, because the N. Y. A., the vocational systems in our cities, and plants that were setting up training centers for their mechanics could use any kind of machine; they were looking for obsolete machines; they were looking for new machines—drill presses, lathes, planers, everything that they could put to use. And as a result of an appeal made by the Governor, men came to the front and said that they had a hobby machine shop in the cellar or in the barn, or they had a plant that was out of use for a number of years, and they turned in drill presses and lathes and planers and everything else.

Realizing that this expanding program has caused you to promulgate these very effective directives, has caused O. P. M., the National Association of Manufacturers, and the Navy to take cognizance of the necessity of expanding this program, in my judgment it brings to mind just one other necessity. We ought to coordinate all this work. The National Manufacturers, the State manufacturers, the State departments of commerce, the O. P. M., the Navy Department, and the War Department ought to have an expeditor to emphasize the need of expansion of this program. They have an expeditor in the different agencies, but it seems to me that the President of the United States ought to designate some outstanding individual who would relieve you of a lot of this detail, and I think that that is true all along the line. He could aid the Navy, he could aid the O. P. M., he could go into the various States, and he could do the work that is now being done by so many, many agencies. It is true that the President has made such a plan.

Acting Chairman CONNALLY. That is the function of the O. P. M. now—production management.

Senator MEAD. The O. P. M. should have, in my judgment, in addition thereto, an expeditor or someone in complete charge of this expanding small-plant program, with greater powers and facilities than are now available. It is more or less a paper proposal right now, but I think it ought to be clothed with real effort, real action, real powers; it ought to work with the War Department, the Navy Department, the O. P. M., the State agencies, and all along the line. We have a sort of skeleton outfit there now, but it occurs to me we have need for a really big, growing outfit to take care of all these small plants, small machine shops, skilled workers, and so on, that are not brought into play as yet because there are really hundreds and hundreds of them that are without work.

At this Buffalo clinic that I am familiar with, they said they needed contracts, a good many of them said they needed credit, and a good many of them said that they have all the facilities except a subcontract. It occurs to me that we need a Nation-wide system under the direction of a powerful head that could really bring this great productivity that we have idle into action. It is really here, it is worth something, and it should be explored.

I think that it sort of crept up on us, and I think you are doing a fine job. I think your directives are going to emphasize the need for an expansion of this program, but I think we ought to give it color and some dynamic force by Presidential order that would excel that set-up that we now have.

Mr. PATTERSON. Of course, we have now a machine tools committee, a combination of O. P. M., Army, and Navy. Mr. Britton, of the O. P. M., is head of that, and we have an Army officer, Colonel Hayes, and there is a naval officer also on that. They are supposed to be supreme on machine tool matters now.

Senator BREWSTER. Would you indicate whether or not since the hearings began (you discussed at that time the matter of industrial mobilization plan)¹ you still feel that we may now prudently continue without putting that plan into effect?

Mr. PATTERSON. I didn't catch that.

Senator BREWSTER. Do you still feel that we may now, in view of what has been recognized as the full emergency, proceed without putting our industrial mobilization plan of the War Department into effect?

Mr. PATTERSON. You mean the War Resources Administration?

Senator BREWSTER. Yes.

Mr. PATTERSON. We have practically the equivalent of that.

Senator BREWSTER. I can't agree with you on that, Judge.

Mr. PATTERSON. The O. P. M. is practically the equivalent of that. It has a somewhat different set-up. It hasn't got the full powers. I asked for some fuller powers last week, and I understand I raised a storm.

Senator BREWSTER. They were of a somewhat different character than contemplated in the war resources planning. Why is it that the War Department is now, with the crisis on us, departing from the studies of 20 years? Why is it?

Mr. PATTERSON. I don't think they are, in any major feature.

¹ See Hearings, Part 1, for previous testimony of Mr. Patterson.

Senator BREWSTER. We would feel much easier if the study were being used as the basis for our procedure rather than other improvised things which result in this apparent constant lack of co-ordination.

Mr. PATTERSON. One of the features of the industrial mobilization plan was to place the full industrial resources of the Nation behind the military and naval effort.

Senator BREWSTER. That is the whole purpose of it.

Mr. PATTERSON. That was one of them.

Senator BREWSTER. Did it have any other?

Mr. PATTERSON. That is the prime one.

Senator BREWSTER. Yes; that was the whole object.

Mr. PATTERSON. The War Department caused legislation to be introduced to bring that about, and it doesn't seem to have met with any favor at all. That was to really enable us, if there is a machine tool idle, to go and get it whether the owner wanted to give it up or not, and get it at a fair price. As I understand it, people seemed shocked by that proposal.

Senator BALL. It was a little broader than that, wasn't it?

Mr. PATTERSON. Machine tools were one of the things we had in mind. We said "anything useful for national defense." It seemed to me that if the country called the manpower of the Nation out by draft, and it came to a question of equipping those troops and giving them the necessary munitions by draft on property and what people owned it was no more than reasonable to do it.

Acting Chairman CONNALLY. You believe that a piece of metal, or a piece of wood, or a piece of dirt is not any more sacred than a man's life. Is that it?

Mr. PATTERSON. I agree with you.

Senator BREWSTER. Of course, what you have in mind could be very easily and very simply accomplished by simply adding one word to the amendment by the Senator from Texas.

Mr. PATTERSON. What is the magic word?

Senator BREWSTER. The Senator from Texas now says "plants," and he feels that simply by adding the words "personal property" we will have everything.

Acting Chairman CONNALLY. If you will examine that amendment as carefully as you are examining this witness you will find that it has very broad powers in there. It isn't restricted to plants.

Senator BREWSTER. I couldn't find anything but the word "plants." There may be; I hope there is. But, as I understand it, Judge, you do feel that you need further expansion of your powers?

Mr. PATTERSON. Yes; I do.

Senator BREWSTER. I agree with you completely. I am not one of those who has criticized any requests you have made, I may say. I would simply go the complete step to the well-considered conclusions of 20 years, resulting from the last war, resulting from this one, and put that immediately into effect.

Mr. PATTERSON. I agree with you on that. We differ only, I think, as to the point to which it has been carried into operation. You don't view the O. P. M. as the equivalent of that.

Senator BREWSTER. The evidence shows that they are still in an advisory capacity except as Executive orders may modify.

Mr. PATTERSON. They have now complete priority powers.

Senator BREWSTER. But the witness here Tuesday said he had charge of the Small Contracts Division of O. P. M., and he testified that there was practically nothing he could do unless he were asked, and his advice during May was asked on \$18,000,000 in contracts out of over one billion placed,¹ which seemed to indicate that he was not regarded as very important. Perhaps that was all that was advisable, I don't know; but it certainly didn't indicate a great regard for this centralizing and coordinating agency.

Acting Chairman CONNALLY. I wouldn't favor turning over all of the authority to the O. P. M. and ousting the Army and the Navy. Of course, its duties are advisory. The Army knows what it wants better than the O. P. M. knows what it wants; and the Navy knows what it wants better than the O. P. M. knows what it wants. You have the legal authority to make these contracts, and you call in the O. P. M. to ask them, "Now, we need this stuff. How can you help us get it?"

Mr. PATTERSON. That is right.

Acting Chairman CONNALLY. And if the O. P. M. were to call some dollar-a-year man down here and turn it all over to him and oust the Army and the Navy, we would be in one hell of a fix.

Mr. PATTERSON. I think so, too.

Senator BREWSTER. I would be gratified if, out of this, we could at least educate ourselves as to what the war-industries mobilization plan provided, which was that the Army and the Navy should determine what they required, and that then one industrial authority should procure that stuff under a comprehensive plan. That is what we haven't got; that is what we must have. I said it a year ago; I say it today, and I will continue to say it until we get it, and I am sure the Senator from Texas will ultimately come to recognize its imperative necessity.

Acting Chairman CONNALLY. I recognize its imperative necessity now, but I don't agree to your method of getting it. Your method is to drop the Army and that Navy that have been at this job for years and years, and bring in some industrial fellow and let him have authority to do everything. I am not for that. We are fighting a war; we are not in a Rotary meeting. We are in a war.

Senator BREWSTER. The only thing I can ask is, is the Senator from Texas a military authority? We have the report of the War Department on this question, and I will subscribe to it 100 percent, and I understand Judge Patterson has just said that he is in full agreement with those studies and recommendations. The only question is to what extent they are now actually operating. That is the only question between him and me. It is not whether they should be, but whether they are.

Acting Chairman CONNALLY. There is no question, as I see it. Judge Patterson says that he is doing now, and the War Department is doing now all they can to attain that objective, as I understand him.

Mr. PATTERSON. Yes, sir; I think that the main features of the industrial mobilization plan are embodied in the set-up that is now in existence. Senator Brewster thinks not. I think he places more emphasis on some things that I regard as details, which he thinks are more important. I think that is the difference between us. So far as other things are concerned, like additional legislation necessary to give us more powers, we have laid that before Congress, and its fate is in the hands of Congress.

¹ Robert L. Mehornay, *supra*, pp. 1373-1374.

Senator BREWSTER. You have done your duty when you have done that.

Mr. PATTERSON. I will be heard on it, I suppose, and I will expound.

Acting Chairman CONNALLY. We don't want to keep you from duty.

Senator BALL. Mr. Chairman, I would like to ask a couple of questions.

Acting Chairman CONNALLY. I beg your pardon.

Senator BALL. Mr. Secretary, do you know how many plants producing materials for the War Department are operating on three shifts, 24 hours a day? Do you know what percent of them are?

Mr. PATTERSON. I can't give you the percentage. My general understanding of it is this, that on the critical items, they are operating as nearly to that basis as they can.

Senator BALL. With available labor.

Mr. PATTERSON. I had a complaint come in, oh, a month or so ago, that a plant that was making some tank production for us on the day it was visited, I think, it was working only about 5 hours. That alarmed me, and I took it up. I found out that the men who were making the short item were working full time, as nearly 24 hours, 20 hours, say, or something like that, as could be effectively done, and that there was nothing for the other men to do until these fellows had caught up. I can't give you the figure, but from such investigations as I have made on short items and urgently needed items, it has been a condition of that kind.

Senator BALL. Is that true of the aircraft industry?

Mr. PATTERSON. In the main it is, the ones that we are the shortest of, like airplane engines, where we have to wait for those before we can assemble; that is true of them. I wouldn't say it was true of every one of them, Senator, though.

Senator BALL. You have legal authority now to negotiate contracts?

Mr. PATTERSON. There is, I think, one large airplane company that is not on what I would consider full production, but I have been told there were certain reasons for that, the nature of which I just don't recall now. I myself think that they could go out a little more than they have.

Senator BALL. I got that impression. I visited the Martin plant on Saturday morning, and they had only a third of the men working.

Do you have authority now in negotiating contracts—

Mr. PATTERSON (interposing). Of course, Martin is one of the plants that has been held up by shortage of parts from subcontractors. They have had continual trouble with that. Whether that brought about the condition you describe, I can't say.

Senator BALL. Do you have authority now, in negotiating your contracts on a fixed-fee basis, to provide a sliding scale with an incentive, a bonus payment, if they finish ahead of schedule, and a penalty if they finish late?

Mr. PATTERSON. We have the penalty. That is an old-time Army practice.

Senator BALL. But how about putting in the incentive? Could you do that under the law now?

Mr. PATTERSON. We could.

Senator BALL. Has it been considered? I understand the Navy has some clause of that sort in its contracts. Of course, their ship program is ahead of schedule.

Mr. PATTERSON. A bonus to beat the schedule?

Senator BALL. Yes.

Mr. PATTERSON. It has been given some study; yes. I don't know of any contracts that have it, do you? They have always carried the penalty, of course, for delays, and that is one of the rows you always have. One of my jobs is to hear appeals by contractors of penalties imposed.

Senator BALL. Don't you think payment for finishing ahead of schedule might be helpful?

Mr. PATTERSON. I think there might be real merit in it; yes.

Senator BALL. Mr. Secretary, Don Nelson, head of the Production Division of O. P. M., testified here the other day. He insisted that there was need for a tremendous speeding up of this whole program, and he suggested two or three specific ways that we might get it. One was piling up appropriations and contracts to increase the pressure on every contractor to speed up operations.

Mr. PATTERSON. I agree with that.

Senator BALL. And the second one was to——

Mr. PATTERSON (interposing). You mean the backlog.

Senator BALL. Yes.

Mr. PATTERSON. I agree with that.

Senator BALL. The second one was to renegotiate existing contracts to move up the completion dates. In other words, he felt that would force many of these prime contractors who are not doing it, to put on three shifts a day and to subcontract more of their work, and he added that it might be feasible to even specify that certain parts must be subcontracted or a certain percentage, which, of course, would vary with the article being produced.

Mr. PATTERSON. That is being done and has been in effect for some time.

Senator BALL. You mean you are renegotiating existing contracts now so far as moving up dates?

Mr. PATTERSON. So far as schedules; yes, sir. I have discussed that quite fully with Mr. Nelson and his associates there, and I agree with them on all points, and we are doing it.

Senator BALL. He indicated that it had been discussed, but he indicated that it wasn't being done yet. I am glad to hear that it is.

Mr. PATTERSON. The situation in general on aircraft and, as I understand it, on items for the Navy Department—although the Navy Department can speak for themselves—is that they have put out a very large bulk of orders which will tax the industries that are furnishing them for a long time to come. That has not been the case with some items, like some ordnance items, but we are now in process of asking for further appropriations to put those on the same basis of those other two. That is the general picture.

Senator BALL. If a man is making antiaircraft guns, you would pile up orders on him so that even at top speed, he can see 2 or 3 years' work ahead.

Mr. PATTERSON. I think if a man is sawing a pile of wood, unless the pile is so big as to make him hopeless, he works at it with better will and vigor if there is a substantial pile to work upon than if he sees only three or four sticks there.

Senator BALL. For instance, we hear very definitely that some of these contractors have work for only 6 months or a year on contract now, and there is no incentive for them to put on three shifts a day.

Mr. PATTERSON. Well, we have already put repeat orders with most of those fellows within the last 3 weeks. We found in the ordnance program that we had certain savings, so-called, that some of our estimates had been higher than the actual costs proved to be. I think it involved over a hundred million dollars, as I remember it, and we used all that money without recourse to further appropriations for the placing of repeat orders on business that would have expired, say, within 6 months.

Senator BREWSTER. What is the situation on the production?

Mr. PATTERSON. You have to do that well in advance, too, or else you get a lag. If you cut the time too short, there is a drop down there before it picks up again.

Senator BREWSTER. What is the situation on the production of bantam cars?

Mr. PATTERSON. What is that?

Senator BREWSTER. Bantam cars?

Mr. PATTERSON. What is the situation?

Senator BREWSTER. Yes.

Mr. PATTERSON. Initially we had orders for 4,500 of them—1,500 from Ford, 1,500 from Willys-Overland, and 1,500 from the Bantam Co. A month or so ago, I placed orders for 2,000 more—I think, 1,000 from the Bantam Co. and 1,000 from the Ford Co., because Ford's orders were about to expire. He was the first to get into production and delivery. And the Bantam was second, and the Willys-Overland was third.

Senator BREWSTER. How far have the Overland gone? How much have they produced?

Mr. PATTERSON. I think they are in the course of delivery now.

Senator BREWSTER. Are you sure of that?

Mr. PATTERSON. I think so. They were scheduled for June. Ford was scheduled to make his first deliveries in March; Bantam, I think, either the close of April or the early part of May; and Willys-Overland in June.

Senator BREWSTER. Would you have a check made?

Mr. PATTERSON. We didn't place a renewal order yet with the Willys-Overland because they are still busy on their first order—the other two weren't. We think there is a demand for that car from its use in the field. For the time being, at any rate, we intend to keep up that production.

Senator BREWSTER. Has the Overland been tried out?

Mr. PATTERSON. The car?

Senator BREWSTER. Yes.

Mr. PATTERSON. They have a pilot model; yes. It is a bit heavier than the other two.

Senator BREWSTER. Will you check on that question of deliveries and give us a report?

Mr. PATTERSON. Whether they have delivered yet?

Senator BREWSTER. And give us the precise status of it.¹

¹ See footnote 2, *infra*, p. 1404.

Mr. PATTERSON. Their car is a bit heavier and a bit more powerful than the other two. The Ford engine and the Bantam engine have not got quite the horsepower that the other has.

Senator BREWSTER. How were those orders placed? Were they on bids or were they negotiated?

Mr. PATTERSON. Last summer the Quartermaster Corps called for 70, a kind of trial order. That was on competitive bid, and those 70 were produced by the Bantam Co. Last fall they negotiated a contract with each one for a lump sum. It was not a formal competitive bid. Those three companies were the only companies interested in the automobile industry. No one else came forward and showed any interest in the item. We placed an order with each of the three companies, mainly for this reason, that it has been the War Department's policy not to get tied down to one source of supply, but to have a number of sources of supply, for several reasons. One thing is the price, and another thing is that you don't want to be dependent upon the output of just a single company, especially if it is a small company.

Senator BREWSTER. I think I would appreciate it if you would furnish the committee with a report on that particular situation, both as to the negotiation of contracts and the status of deliveries.

Mr. AMBERG.¹ That has been asked by your counsel, and we are getting it up for you, Senator.²

Mr. PATTERSON. Yes; we will be very glad to. I think right now we have 6,500 of those cars either delivered or on order.

Senator MEAD. Mr. Secretary, I just want to say in conclusion that I think the War Department is doing an admirable job, but from the record I believe a further expansion is necessary. We have a fine man in O. P. M., and that if it is an agency that is worth while, we ought to encourage it; that if it is not, we ought to abolish it. His name is Mr. Mehornay,³ and he has appeared before our committee. He says that all he has to do in connection with the small business program, or subcontract program, is to give advice when it is asked for. He can't even advise his own superiors unless he is asked. He can't advise the War Department unless they ask him, and he can't advise the Navy Department unless they ask him. He says of all the billions that have been spent, I think they asked him for advice on \$18,000,000.⁴ Until such time as we really have a powerful agency taking care of these subcontracts, we are not going to get very far. If the Martin plant is held up because of some one subcontractor, there are still 9,000 subcontractors looking for jobs. The more we have of them, the less likelihood there will be of a hold-up. In other words, if they are all working, we will have thousands of subcontractors, not now working, anxious to compete for all this business.

So I think it is up to the Army and the Navy and the O. P. M. to get together and really make this agency what it ought to be, or else abolish it. It is certainly not functioning now. That seems to be the weakness, and I am for this added power that you want, so far as utilizing machines, plant facilities, and I think you should have that. I think that ought to come even before we give you the power to use

¹ Julius H. Amberg, Special Assistant to the Secretary of War.

² See Hearings, Part 7, for full discussion of allocation of "jeep" car contracts.

³ Robert L. Mehornay, whose testimony appears supra, p. 1368 et seq.

⁴ Ibid, at pp. 1373-1374.

human beings, but I think that this agency headed by Mr. Mehornay either ought to be abolished or to be given some powers. They could go around about the country like our Commerce Department in our State, holding clinics and getting these people together, and then coming back and insisting that subcontracts be awarded. Having your support and having the Navy's support, I think we would get some place. But to be permitted to function only when your advice is requested, and to give advice on eighteen million out of eighteen billion, is a pretty small percentage.

Acting Chairman CONNALLY. In all fairness to the Under Secretary of War, he is not responsible for that.

Senator MEAD. Oh, no; I am just asking them to get together.

Acting Chairman CONNALLY. Mr. Mehornay got his authority from his superiors.

Senator MEAD. He doesn't have to thank them for it because they were pretty stingy in giving it out.

Acting Chairman CONNALLY. Somebody has whatever authority there is.

Now, Mr. Secretary, is there any other matters you wish to submit, sir?

Mr. PATTERSON. No, sir.

Acting Chairman CONNALLY. Any other questions?

Senator BREWSTER. I want to express my appreciation to you, sir.

Acting Chairman CONNALLY. Yes; I think the Under Secretary knows what it is all about. I want to congratulate him.

Mr. PATTERSON. Thank you very much.

Acting Chairman CONNALLY. Mr. Secretary Forrestal. Will you please sit over there where the stenographer will get your remarks?

TESTIMONY OF HON. JAMES V. FORRESTAL, UNDER SECRETARY OF THE NAVY

Acting Chairman CONNALLY. Mr. Secretary, give the stenographer your name and title.

Mr. FORRESTAL. James V. Forrestal, Under Secretary of the Navy, 2840 Woodland Drive, Washington, D. C.

Acting Chairman CONNALLY. Mr. Under Secretary, you have heard the interrogation of Judge Patterson here about this whole procurement program. I shan't be able to remain more than about 5 minutes, and I will turn the meeting over to Senator Mead, who will preside.

The committee was interested considerably in the fact that you had recently made a trip to England. Probably in connection with these problems you might want to submit some observations as to how this problem is being met in Great Britain and to make any other suggestions or observations that you care to make. So you may go ahead and make such statement as you like, and then the committee will ask you questions.

Mr. FORRESTAL. All right, sir. Would you like me to address—

Acting Chairman CONNALLY (interposing). Have you a prepared statement?

Mr. FORRESTAL. I have a statement on the general policy of the Navy Department on this whole question, which pretty much follows what Judge Patterson has said. We started on this drive about a year ago.

My own predecessor in office began it about, I think, the middle of May of 1940. I might come back to that as questions arise in the Senators' minds, if you like, and I will go on to the other thing.

EXPERIENCE OF ENGLISH IN MEETING DEFENSE PROBLEMS

Mr. FORRESTAL. My observations in England were necessarily superficial, because my stay there wasn't long, but I was curious to find out the experience that they had on these particular things that we find troublesome now, subcontracting and shifts, the training of people, personnel, because that is one of your principal hurdles to overcome. It isn't a question only of material or of machines—it is the people to run them and what you might define as the industrial culture; in other words, the background of the use of the tools and the use of the inventive qualities of the Nation and the skill of workmen, which are things that come down, that are apt to come down, as Senator Brewster knows, through generations. It isn't easily created overnight.

Of a specific case in England, for example, in connection with some of our material (which I would rather not designate specifically because it might be of strategic importance), Sir Henry Tizard said, "You have got to bear in mind that you are an electrically minded Nation, that we are a machine-minded Nation. By that I mean that you have used electrical apparatus far more than we have. You have gone beyond us in the fire control on airplanes and the control of turrets. You have developed that much beyond us—not only have developed it, but have been able to use it." That is because every boy fools with a radio set or a motorcar with magneto, and that is all reflected in the skills that he has when he comes to maturity. The acquisition of that training is one of the things they found that was difficult, and they went, quite early in the war, to the training of women.

Acting Chairman CONNALLY. Mr. Under Secretary, will you please pardon me? I have to go to the floor of the Senate.

Mr. FORRESTAL. I quite understand.

Acting Chairman CONNALLY. I mean no disrespect or discourtesy. Senator Mead will take charge of the meeting.

Mr. FORRESTAL. Thank you very much, Senator.

(Senator Mead assumed the chair.)

Acting Chairman MEAD. All right, Mr. Secretary.

Mr. FORRESTAL. To go back to the question of subcontracting, the minute I asked a question, the man at the head of the Ministry of Supply, Sir Andrew Duncan, said that he could practically tell me what my questions would be, because, he said, "We have gone through a very painful process." To boil down what he said, it comes to this, that there is unquestionably great use that can be made of the small shop, but there is a point of diminishing return at which you fail to get the increased production and get retardation instead. He said, "It is a constant struggle to strike that balance between pushing the materials out into the small plants and being sure that you get the speed and the precision that are required when you push them out." I mean precision of manufacture, not of work.

He said, "We haven't got the answer yet; we probably shan't have, because that battle is never over." And he said, "It comes down to

leg work, and by that I mean a man goes to the plant and looks at precisely the tools that are available and that can be used. In many cases you will find that they cannot be used, and you have to wash that one off or try to find some other use that it may fit to."

He practically said what Judge Patterson has said, that they found great difficulty in getting tools for the highly technical apparatus that now goes to make war—your bomb sights, your fire-control apparatus, precision instruments for navigation. You just can't train people overnight. It is a slow process, and you can't get the tools overnight because there are tolerances that they don't use in the normal business of manufacture.

He said that the motor industry, about which I asked him particularly, had been very disappointing in England in the production of aircraft. They have four major companies. Lord Beaverbrook's office confirmed this, that down to date they have had relatively small results because, he said, "You just cannot get either the management or the workmen into what I call the cultural background necessary to produce the fine precision instruments and the engines and the parts that go into an airplane engine." He said it is just as remote from a motor engine as a truck is from a Rolls-Royce motor.

They are still struggling with the training of personnel to fit that need, and I asked him the question, which is one that bothers us always, as to the extent of dilution. In other words, we are now expanding an airplane industry many hundredfold. I have been interested to see how fast you can train personnel. There is a point there of diminishing return if you bring in too many people from the outside that are unskilled, that have no previous skill. It is a question of how much you can afford to assign men to train those newcomers without slowing down your production, and that is a never-ending battle until probably the war is over. We are going to go through that to an even greater degree because the task upon us is going to be greater.

The third thing that I think was of interest to me is the question of shifts. There is as much divergence about the use of shifts as there are industries. As Judge Patterson said, those lines that are critical items, the certain tools, certain kinds of electric alloy steels, they try to work 24 hours a day. They found again there that there is another diminishing return, because last summer they went on a 70-hour week, and at the end of the summer, Beaverbrook found that the production was going down instead of up, because there is a limit to the human endurance in any factory work, particularly in fine precision work which calls for eye strain and great manual dexterity.

Senator BREWSTER. What conclusion have they formed as to the most practicable and effective working week?

Mr. FORRESTAL. Working week?

Senator BREWSTER. Yes.

Mr. FORRESTAL. Their hours run, I would say, from a minimum of 55 up to a maximum of 69, and the 69 was in a certain item in connection with airplanes that they had terrific need for. On certain spare parts they run 65 or 68 hours a week. The number of shifts, of course, varies with conditions. I don't like to identify the conditions. You know what they are. The men are willing, but there are certain times when their homes are under attack that they just humanly can't do it.

I made one interesting observation in one of the shipbuilding districts, a commentary on morale more than on technical questions. There was a noticeable increase in production after the first bombing raid. It was a district which has been quite well known for advanced views, let us say, and even in wartime they have had some difficulty in handling them. But after that experience the men came back with a vigorous determination and not only worked more hours but made the hours they worked much more effective. I think I accepted that as fairly valid because it came from a pretty dour character, a Scotchman who wasn't very prone to exaggerate.

These are the main conclusions, the principal observations, that I made. I found that in general they found two 10-hour shifts more practical than three 8-hour shifts, because of the gap in time from one shift to the other. Some of the plants were working three 8-hour shifts. They were having the same difficulty that we have with access roads, the transition from one shift to another, and the parking problem, which we have here also—how to get people away from the plant and back to the plant. There again the military necessities have complicated that for them.

Senator BREWSTER. Did you form the impression that that might be the thing that we should wisely emphasize if we took steps toward increasing the shifts and the hours?

Mr. FORRESTAL. Access roads?

Senator BREWSTER. No. The matter of two 10-hour shifts rather than three 8-hour shifts.

Mr. FORRESTAL. Yes. Well, I have asked in our own Navy Department to have an examination made of that, because I find a great variety in the use of shifts here. Some of that is due to weather conditions, and some is due to the particular habits of the district—the fact that people have gotten used to a full Saturday holiday, and that is a habit that isn't changed overnight, and it may be actually that the two 10-hour shifts, working 5 days a week, with another added 4 or 5 hours on Saturday, will get you better results than trying to work six and a half full days a week.

Senator BREWSTER. That would be in industries which are not on a 24-hour basis.

Mr. FORRESTAL. That is right.

Senator BREWSTER. Because some have been established on that basis, and it is a continuous process.

Acting Chairman MEAD. There are other industries which require perhaps a 1-day shut-down a week where they have furnaces—

Mr. FORRESTAL (interposing). Yes.

Acting Chairman MEAD. And where metals of various types are melted—

Mr. FORRESTAL (interposing). That is right.

Acting Chairman MEAD. And they have to work a little different from the machine industries.

Mr. FORRESTAL. Yes; there are certain industries where you have to have a clean-up shift even during the day, a sort of dog watch, to take care of the odds and ends.

Acting Chairman MEAD. In the steel mills they asked to have the practice of closing down on Sundays so that the repair men and the

maintenance men could go over all the machinery and all the furnaces. That is a system that is characteristic of that particular industry.

Mr. FORRESTAL. Of course, as you find the situation, they have been at war for nearly 2 years, and one is struck by the similarity between the two Nations. The truth is that the Germans were 8 years preparing for war.

Acting Chairman MEAD. That is right.

Mr. FORRESTAL. And they were engaged in a transition from commercial activity to war. And we are trying to do that same thing in a much shorter space of time, and we have got to do it with a great deal more speed and intensity for that reason.

Acting Chairman MEAD. Mr. Secretary, right there could you digress without interfering with your statement and tell us about the system, the set-up, whereby England encourages subcontracts and small-business enterprise, their so-called bits-and-pieces program?

Mr. FORRESTAL. Yes. Well, in some industries, and particularly the airplane industries, they have used a compulsory farming out. I was rather struck, as a matter of fact, that in a shipping industry they didn't have anything near as much as we have. They build, as Admiral Robinson knows, and run on the theory of building a whole ship in the yard in many cases. We farm out—and always have, I believe—about 60 percent of our battleship construction, but that is typical again; that is their industrial habit. They make the turbines and even the guns and degaussing and every other thing in one yard in many cases. They can't change in the middle of the war. They admit that probably ours is better. They said that on the question of the compulsory farming out, you would have to weigh each industry by itself, that it might be very unwise to force certain producers to farm out where they had high-precision instruments to manufacture. In airplanes you can enforce that because that is an assembly job. They have farmed out airplane engines by mandate. But when you come to the highly technical machinery of fire control, navigation instruments, etc., it is obvious you can't do it. Those are like watch-makers—they are technicians, not mechanics.

Acting Chairman MEAD. A good many of those gadgets and instruments are manufactured by a plant other than the airplane manufacturers' plant, but they are manufactured by well-established, long-going plants?

Mr. FORRESTAL. Yes. Duncan said that when you get all through, the back of your job has to be broken by the people who have had the "know-how" for years. There is no getting away from that. You can supplement that, and you have got even to change some of their habits of mind, because they don't feel comfortable about getting the same degree of skill and of accuracy in a job done outside of their control. So, he said, "You have got to break down that habit of mind in the primary contractor, but not force him too far, because otherwise you won't get good material."

Acting Chairman MEAD. Have they an organization similar to our O. P. M., providing materials and aiding production?

Mr. FORRESTAL. No; they haven't. I would say that it is done in segments. There are segments of O. P. M., but there is no one central organization. My impression is that probably, at least in embryo, ours is better.

Acting Chairman MEAD. Is Lord Beaverbrook's authority confined only to aviation production?

Mr. FORRESTAL. Well, it was. It is not now. He is now Minister of State, with general powers, and his post in that job has been taken over by another man, Moore-Brabazon.

Acting Chairman MEAD. And he has aviation only?

Mr. FORRESTAL. That is right, and as I say, there was a great deal of controversy as to the wisdom of his imperial authority, because he is a forceful character. When he needed aluminum, he just went down to the dock and got it, regardless of whether it was meant for a ship or something else, and there are some dangers in that.

Senator BREWSTER. How do they coordinate?

Mr. FORRESTAL. Pretty much by word of mouth, so far as I found.

Senator BREWSTER. The Army and the Navy and the Air Force simply—

Mr. FORRESTAL (interposing). It looks to an outsider like a patchwork, and it could function only in a nation whose geography is so concentrated that you can do things pretty much over the table.

Senator BREWSTER. Their experience would not afford any justification for thinking that we could follow that pattern in that respect?

Mr. FORRESTAL. I wouldn't think so, Senator.

Senator BREWSTER. You are familiar with the war resources mobilization studies of the War Department?

Mr. FORRESTAL. I am, in a general way.

Senator BREWSTER. They emphasized the necessity of coordinating our entire program of procurement.

Mr. FORRESTAL. Yes.

Senator BREWSTER. You would be in general sympathy with that line of procedure, I take it.

Mr. FORRESTAL. Yes; I would. I think we are moving, mind you, along that line.

Senator BREWSTER. Yes; we recognize it. You have followed, I gather, much more than the Army has yet found practicable, the matter of piling up backlogs with your concerns to encourage expedition.

Mr. FORRESTAL. From the very nature of our work, we can do that.

Senator BREWSTER. And that explains something of the gratifying progress the Navy has been able to make in deliveries.

Mr. FORRESTAL. Yes; because we were a going concern, and the chiefs of the bureaus had been doing business for years with a number of established suppliers, whose customs they knew.

Senator BREWSTER. Have you been renegotiating contracts with a view to expediting contracts?

Mr. FORRESTAL. Admiral Spear, we have done some of that.

STATEMENT OF REAR ADMIRAL RAY SPEAR, CHIEF, BUREAU OF SUPPLIES AND ACCOUNTS, UNITED STATES NAVY

Admiral SPEAR. It is almost of daily occurrence that we get a request from one of the technical bureaus to change a contract, to decrease the date of delivery, and we are paying for that extra expense. That is assisting the contractor by increasing the amount of compensation that he will receive under the contract.

Senator BREWSTER. You have all the authority that is required to do that?

Admiral SPEAR. I hope I have. I am doing it every day, sir.

Senator BREWSTER. But you are not hampered by any legal restrictions?

Admiral SPEAR. No, sir; not at all.

Senator BREWSTER. Somebody said there was a sort of disagreement between the services as to authority to do that. Is that so, as far as you know?

Admiral SPEAR. I will read section 9 of Public, No. 671, sir, which reads:

The Secretary of the Navy and the Secretary of the Treasury are hereby authorized to modify existing contracts, including Coast Guard contracts, as the Secretaries concerned may deem necessary to expedite military and naval defense and to otherwise effectuate the purposes of this Act.

Senator BREWSTER. What was that on? Was that a rider on an appropriation bill?

Admiral SPEAR. No; that is section 9 of Public, No. 671. We are using that authority.

Senator BREWSTER. That is confined to the Navy and the Treasury, apparently.

STATEMENT OF COMMANDER M. L. RING, BUREAU OF SUPPLIES AND ACCOUNTS, UNITED STATES NAVY

Commander RING. The Army has the same authority under Act No. 703, I think, sir.

Admiral SPEAR. In order that the committee might get a complete picture of that, I would like to cite a directive that went out to all our field agencies that reads this way. As you know, we have a very elaborate inspection service at all our plants, and this is the directive [reading]:

Inspectors of machinery of the United States Navy and inspectors of naval material will insure that delivery dates are in accord with the expedited construction program.

With regard to the use of overtime and shift work, the directive states:

Overtime and shift work should be fully utilized to expedite the building program. To this end a 6-day, 40-hour week, as a first shift, should be adopted as standard for the contractors, with second and third shifts built up as rapidly and as completely as will insure the greatest progress. The extra cost of overtime in shift work will be allowed the contractors in accordance with the terms of the contract. Where increased cost to the Government due to the employment of overtime and shift work would be incurred for which no specific provision is made in the contract, overtime and shift work will not be ordered unless covered by a change under the contract issued by the Bureau.

That refers to my Bureau and the recommendation of the technical bureau.

The inspectors are directed to urge the contractors to increase their working force as rapidly as possible to the end that the maximum productive capacity may be attained.

That is a letter that went out from the Under Secretary's office.

Senator BREWSTER. When was that?

Admiral SPEAR. The Secretary's letter of January 15, 1941.

Senator BREWSTER. I was amazed and intrigued to find the extent to which you were using the N. Y. A. plant at Eastport, Me.

Mr. FORRESTAL. We found them quite helpful.

I may say, in connection with what Judge Patterson said—and I go back to the use of the words “leg work”—that you can find these plants only by somebody going out and looking. You can’t get them by reports. I think that reports have value, however, and I think that this all serves a very useful purpose of stimulating the examination of those plants. But you can’t tell how good they are until someone goes and takes a look. With that in mind, for the last several weeks we have had Commander Simpson, of the Chief of Naval Operations’ office, going about the country trying to contact the offices of Mr. Mehornay, to make contact with those offices for our inspectors in the various naval districts so that they could implement the very useful services that he is rendering. As a matter of fact, we have had him at several of our morning meetings, to try in a practical way to use the information that he has gathered. There really is no other way to do it. You can’t do it by telephone or correspondence. You have got to look.

Twenty years ago, the Niles Bement Pond Co., with which I had some connection, after the last war got standard with a very large inventory which they were carrying at about nine or ten million dollars on their books. When you went into the inventory, the usable part of it was worth about a million, and some of the tools that they had on that inventory went back as far as 1905—1902, I think, some of them. We could find out what we had only by looking, and testing, and seeing whether it was workable, and there was no other way.

Acting Chairman MEAD. We have been very successful in our State in these industrial clinics that are being held under the direction of the State director of commerce, in which all of the manufacturers, large and small, those with and without contracts, come together in a democratic fashion and map out a program, and it is really amazing the number of contracts that are placed in the hands of these small manufacturers who are able to do it, who are not doing it simply because they have never been able to get together as you explained they get together over there.

Mr. FORRESTAL. Yes; really, geography plays a big part in our problem. That is what I call the industrial center of the country—the Middle West, or New England.

Senator BREWSTER. Thank you.

Acting Chairman MEAD. That was just on the side.

Mr. FORRESTAL. I am thinking of Bath, Maine, and Hartford, Conn. But it comes down to geography and the individual concerned.

There is a man in Cincinnati, who runs the Cincinnati Milling Co., who is a progressive manufacturer. We had a meeting in the Navy Department last December on this very subject, trying to make a beginning of a drive in this direction. Well, this Mr. Geier at that time was, I think, farming out about 50 percent of his work, but because he planned for it, he had the trained personnel, and he sent his own foremen throughout the State of Ohio to get these plants. When the emergency came, he had the system set up, and so did the Pratt and Whitney Co. in Hartford; that is, the geographical area was compact enough to enable them to do it with those facilities.

Senator BREWSTER. What is the approximate distribution of the procurement that is under way for the Army and the Navy as between the two branches? Do you have that in mind?

Mr. FORRESTAL. Well, ours is about—I had better ask Admiral Spear. Do you have that in your mind? It is about ten billions, I think.

Admiral SPEAR. I think the common impression is that that Navy's program on a money basis is about 10 percent of the Army's expansion program, but does that include shipbuilding, Admiral Robinson?

STATEMENT OF REAR ADMIRAL S. M. ROBINSON, CHIEF, BUREAU OF SHIPS, UNITED STATES NAVY

Admiral ROBINSON. The shipbuilding including ordnance and all related costs is a little over 8 billion.

Senator BREWSTER. Ten to eleven billion.

Admiral SPEAR. I was making a quick allocation of the lease-lend money that was appropriated. I don't know on what basis that was.

Senator BREWSTER. Do you know the approximation of the Army?

Admiral ROBINSON. I don't know.

Senator BREWSTER. We talk about 40 billion. I don't know whether that is the total. What I was leading up to is that Mr. Mehornay indicated to us—and he seemed to be very practical in his approach—that he believed that in the next 4 months we could increase the machine tool use from a 10-hour average to 15 hours. That would be a 50 percent increase.

Mr. FORRESTAL. I don't know what precise increase you can get, but you can get an increase, I believe.

Senator BREWSTER. To what extent that would be dependent upon the collaboration with the Navy or Army, of course, wasn't indicated. We assume, of course, the Army would be the ones chiefly concerned, and I gather from what you say that you are trying to cooperate to the fullest extent possible.

Mr. FORRESTAL. We are trying to do that, as I say, by getting the Navy men in the field to see the Defense Contract Service men in the field and to get the exact knowledge that you need before you can come to a decision. A man can give you a list of tools, say a small plant in New York State has five hundred and fifty-odd. Well, some of them are usable, but it is a long way from 550. It would come nearer a hundred.

Senator BREWSTER. What is the situation as to training? You referred to that very briefly in your preliminary statement about the matter of training programs to get the men functioning.

Mr. FORRESTAL. I think it is very important.

Senator BREWSTER. How long do you expect that takes with the average mechanic on a special operation?

Mr. FORRESTAL. Well, I am not a mechanic, Senator. It varies again with the industry. In the airplane industry I think you can do it very quickly. I think in 6 months you could have a man who is useful in his job. But when you come down to a mechanic in the airplane engine plant, you have got a much different proposition, and on that I wouldn't want to hazard a guess—certainly well over a year.

Senator BREWSTER. How much percentage do you allow in the navy yards?

Mr. FORRESTAL. In the navy yards? Admiral Robinson, do you know how many apprentices there are?

Admiral ROBINSON. No, sir; I don't know the figures but will furnish them.¹

Senator BREWSTER. Do you have a percentage?

Admiral ROBINSON. No; it isn't a fixed thing at all, sir. It varies. Right now every navy yard is carrying an enormous training force and have all the apprentices that they can get ahold of. That is about what it amounts to.

Senator BREWSTER. You are under no restrictions on that?

Admiral ROBINSON. At present we are not; no.

Senator BREWSTER. You can take all that the management feel they can absorb.

STATEMENT OF CAPT. E. D. ALMY, SHORE ESTABLISHMENTS DIVISION, UNITED STATES NAVY

Captain ALMY. Between 20 and 25 percent.

Mr. FORRESTAL. Senator, in that connection we make provision in many of our contracts for extra cost for the purpose of training. In other words, we encourage the contractor and recognize that.

Senator BREWSTER. That is in our private industry, outside the yards?

Mr. FORRESTAL. Yes; in England they found that 20 percent of skilled personnel was the absolute minimum that could be effectively used in training unskilled workers.

Senator BREWSTER. That is one in five.

Mr. FORRESTAL. In other words, if you got below that, you just didn't get any result.

Senator BREWSTER. You use the leader system, and so on?

Mr. FORRESTAL. Yes.

Senator BREWSTER. The way the industries are doing?

Mr. FORRESTAL. Yes.

Acting Chairman MEAD. Mr. Secretary, there was one thought that I had in mind that came to me when we were discussing the shipbuilding program. Our President, in a recent message with reference to the St. Lawrence seaway, pointed to the necessity of utilizing Great Lakes shipyards in connection with our national-defense program. The Maritime Commission have determined that the use of shipbuilding facilities spread equally around the United States, having in mind the delivery of material and the development of skilled personnel, is a proper program to follow, and that leaves out a number of shipbuilding facilities that were in the World War production picture, you see.

What about the utilization of the shipbuilding facilities that are idle, such as the shipbuilding facilities at Albany, at Poughkeepsie, and one or two places in New England?

Mr. FORRESTAL. You will excuse me from answering that question myself, Senator, because I get exposed, as you no doubt do, to some of the importunities of people in those districts.

¹ Admiral Robinson subsequently informed the committee that the number of apprentices in all naval establishments on June 1, 1941, was approximately 6,000.

Acting Chairman MEAD. We would like to see them utilized.

Mr. FORRESTAL. So should I.

Acting Chairman MEAD. And it occurs to me that it would strengthen the President's argument.

Mr. FORRESTAL. Again, it is a question of labor.

Acting Chairman MEAD. In general, I disagree with him, which I very seldom do, in connection with the St. Lawrence, but if there is any point to his argument that we need these added facilities, why are there idle facilities now that the Maritime Commission tells us we don't need?

Mr. FORRESTAL. Labor is the chief problem.

Acting Chairman MEAD. Labor and delivery of materials.

Mr. FORRESTAL. Chiefly labor, I would say, Admiral Robinson.

Acting Chairman MEAD. Mr. Secretary, in connection with the point you make with reference to labor, in Albany they just finished building a ten or twelve thousand ton tanker. They haven't any more orders, so they have to lay off their skilled workers. They are prescribed against by the Maritime Commission because they won't create another agency or facility in that zone.

Mr. FORRESTAL. I would like to look into that.

Acting Chairman MEAD. And they haven't any naval contracts. When I told Mr. Cooke, of O. P. M., he was very much surprised.¹ I said, "Well, so was I, but I can give you all the evidence and all the information available."

There is a going plant, with personnel and shipways and everything else, and they are not being used. The President points to the fact that we ought to have this seaway so we could use some additional facilities. We ought to use those that are already available.

Mr. FORRESTAL. Do you know that yard, Admiral Robinson?

Admiral ROBINSON. No, sir; we haven't used that yard. I don't really know, Senator, of any idle shipbuilding facilities in the United States. If there are any I would like to know about it.

Acting Chairman MEAD. This is a bona fide shipyard under the jurisdiction of the Albany Port Authority, created under the State of New York, and they are looking for contracts.

Admiral ROBINSON. Of course, all the naval program, you understand, sir, for large ships has been placed.

Acting Chairman MEAD. Yes.

Admiral ROBINSON. We have no contracts to award. Of course, the Maritime Commission does. That may be the trouble. But, as a matter of fact, from time to time we are getting contracts for the British and other people for ships. I don't know of any idle shipbuilding facilities in the United States, sir. I differentiate between shipbuilding and boatbuilding.

Acting Chairman MEAD. Look into that one and see if there is any possibility.

Mr. FORRESTAL. Mr. Chairman, I should like to introduce the following documents into the record [reading]:

Reduction of Manufacturing in Navy Yards to Release Personnel and Equipment for Shipbuilding and Repair Program.

Transfer of Navy Manufacturing to Private Concerns—Change of Specifications to Conform With Private Industrial Methods.

Letter to Contractors and Prospective Contractors—Subcontracting or "Farming Out" More Work.

¹ See Hearings, Part 4, pp. 1135-1136.

Expedite Shipbuilding—Contractors to Use Extra Shifts, Overtime—More Subcontracting.

Subcontracting or "Farming Out" More Work.

O. P. M.—Defense Contract Service—Organization and Objects—Navy Liaison Officer.

Expediting National Defense—Subcontracting or "Farming Out" Work—Utilization of O. P. M. Defense Contract Service.

Utilization of O. P. M. Defense Contract Service.

Contractors' Preference List for Machine Tools—Utilization of Idle Machine Tools.

List of Regional Offices Visited in Connection With Defense Contract Service.

Acting Chairman MEAD. They may be admitted into the record.

(The documents referred to were marked "Exhibits Nos. 73 to 82," inclusive, and appear in the appendix on pp. 1479-1494.)

Acting Chairman MEAD. Mr. Secretary, if there is nothing else, the meeting will adjourn until Monday morning at 10:30, because we are voting on a very important matter.

(Whereupon, at 12:25 p. m., the committee adjourned until 10:30 a. m. Monday, June 16, 1941.)¹

¹ Hearings on aluminum held June 16 and 17, 1941, appear in Hearings, Part 3.

INVESTIGATION OF NATIONAL DEFENSE PROGRAM

WEDNESDAY, JULY 9, 1941

UNITED STATES SENATE,
SPECIAL COMMITTEE INVESTIGATING THE
NATIONAL DEFENSE PROGRAM,
Washington, D. C.

The committee met at 10:38 a. m., pursuant to adjournment on Tuesday, June 17, 1941, in room 318, Senate Office Building, Senator James M. Mead, New York, presiding.

Present: Senators James M. Mead (acting chairman) and Carl Hatch.

Present also: Hugh A. Fulton, chief counsel.

Acting Chairman MEAD. The committee will please come to order.

Admiral Robinson, we are swearing in witnesses. Will you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

Admiral ROBINSON. I do.

TESTIMONY OF REAR ADMIRAL S. M. ROBINSON, CHIEF, BUREAU OF SHIPS, UNITED STATES NAVY

Acting Chairman MEAD. Has the reporter been given your full name, title, et cetera?

Admiral ROBINSON. Rear Admiral S. M. Robinson, Chief, Bureau of Ships.

NAVAL EXPANSION PROGRAM

Acting Chairman MEAD. Admiral, the committee is very interested in learning something about the naval-expansion program so far as it applies to costs, profits, and the location of contracts in public and private yards. You may proceed, if you will, to tell the committee, in your own way, just what you know about this program.

Admiral ROBINSON. Well, the Navy's present program is based on three different acts, generally speaking. There were the various acts that had authorized shipbuilding before last July, and then the 11 percent, so-called, and 70 percent, so-called, expansion acts, and the contracts for those expansions were placed, generally speaking, between the 1st of July a year ago, 1940, and the time of the passing of the Appropriations Act implementing those acts, which was sometime in September.¹ All together, there was placed at that time about

¹The Eleven Percent Act of June 14, 1940 (Public, No. 629, 76th Cong., 3d sess.), was implemented by the First Supplemental National Defense Appropriation Act of June 26, 1940 (Public, No. 667, 76th Cong. 3d sess.): the Seventy Percent Act of July 19, 1940 (Public, No. 757, 76th Cong., 3d sess.) was implemented by the Second Supplemental National Defense Appropriation Act of September 9, 1940 (Public, No. 781, 76th Cong., 3d sess.).

\$4,000,000,000 worth of shipbuilding covering the various acts that had been passed prior to that time.

The bulk of that work was placed in shipyards, private shipyards. The reason for that was, of course, that the facilities and possibilities of expansion in the private yards were much greater than they were in the navy yards. In fact, both the navy yards and the shipyards were expanding right up to the limit. As far as we could see, it was economical to do. We placed just as much shipbuilding in each one of them as we possibly could. We had to do that in order to get the whole program placed. The program was placed very promptly. In fact, practically every contract was signed on the day that the appropriation bill passed, so that there was no time whatsoever lost in getting under way on this expansion.

Now, the Congress had given us an authorization for about \$500,000,000 for expanding shipbuilding facilities. That money has also been contracted for since that time, and we are now up to the point where we have got to get additional authorization for expanding facilities. The present facilities are not sufficient to take care of the present rate of progress in the shipyards. The money that has been spent so far has been largely spent in the shipyards and navy yards themselves. Now, what we have to do is to bring up the collateral manufacturing establishments, such as plants for the manufacture of pumps, turbines, blowers, generators, cables, and so forth, so that they will be able to supply the material as fast as we can use it in the shipyards. The rate of shipbuilding at the present time is largely determined by the rate at which we can get material. In the beginning, of course, it was determined by the rate at which we could get skilled labor. All of the yards have started training programs, and they have built their labor up to a point where at the present time the rate of progress is equal to or possibly slightly greater than the rate at which we see that we can get materials, so that it becomes absolutely necessary that we speed up the rate of production of materials. That is, everything that goes into steel, from steel right on down the line, and that is being done.

As to the progress of the shipbuilding program, at the present time every single combatant ship is ahead of schedule. Those schedules were based, of course, on previous experience with building that type of ship, on the facilities that were available to build them, on the facilities that we were going to install in the future. All that was taken into consideration in placing the dates for building those ships. The dates were supposed to be quite optimistic; in practically every instance the shipbuilders were quite fearful of being unable to meet those dates. Actually, however, I think all of those dates will be anticipated. The reason for that is that the program acquired its momentum much faster than we had expected that it would.

In one respect, the Navy entered this program under very favorable circumstances. For example, we just had a very considerable building program over the previous 7 or 8 years. By doing that, we had done several things. For example, we had built up the technic of building modern ships. We had pretty thoroughly developed the plans and the design of those ships, and the result was that we were able to take on green, inexperienced men, and to expand our forces, and all that sort of thing, at a rate which we wouldn't have been able

to do under ordinary circumstances at all. I think that partly accounts for the rapid acceleration of the building program; and everybody has entered into it very wholeheartedly. The shipbuilders have all cooperated to the fullest extent. The result has been that the shipbuilding program has gotten under way very rapidly.

Of course, one other advantage that we had was that the shipbuilding program was able to get under way about 4 or 5 months before the other rearmament programs were, owing to the fact that we happened to be ready to go, and that was, of course, a very considerable advantage. As time has gone on, we are losing that advantage. In fact, it has practically disappeared at the present time. But, nevertheless, the shipbuilding program is going on, I think, not only at a very satisfactory rate but at an unexpectedly rapid rate. Certainly it is progressing faster than the most optimistic of us had anticipated that we could possibly do under the circumstances.

Acting Chairman MEAD. Admiral, when you say—if I may interrupt—that you got a head start of 4 or 5 months on the other branches of the service, you mean that you were always building ships and you were abreast of the times in modernizing plans for ships, whereas the Army had to wait for tools and assembly-line equipment to get out tanks and armored cars, and so forth?

Admiral ROBINSON. That is right.

Acting Chairman MEAD. You got ahead of them under those conditions?

Admiral ROBINSON. When I say, "got ahead," I mean in the ordering of materials and tools.

Acting Chairman MEAD. Your plans were further advanced?

Admiral ROBINSON. Further advanced, and it was natural that they would be so.

Acting Chairman MEAD. Yes; I think the Navy deserves great credit for that.

Admiral ROBINSON. Well, we are not asking for credit, Senator, but someone asked me once the difference between the Navy in time of war and in time of peace, and I said, "Well, in time of war you turn off the running lights on the ships, and that is about the only difference." It is really a difference in volume, that is all. We aren't doing anything in time of war that we didn't do in time of peace; we are just doing more of it, that is all.

Acting Chairman MEAD. In reference to the expansion of the facilities, particularly the Navy's own facilities, what have you done at Boston, New York, Norfolk, Washington, and Charleston, and other yards that we are acquainted with?

Admiral ROBINSON. I can give you a table which will show the amount of money that has been spent in each one of these places and what has been placed there. I think probably that is the best way to do it.¹ But, generally speaking, I can say that we have expanded the facilities of all shipbuilding plants that we have been using in this country right up to the limit. Now, I say right up to the limit; that is, as far as we could see it some months ago. As time has gone on, it has become evident that there are certain places in which we will

¹ Under date of August 8, 1941, Admiral Robinson submitted a table setting forth the nature of the expansion of navy yard facilities which appears in the appendix on p. 1496.

undoubtedly have to do some more expansion, even in the present shipyards, and particularly in the present navy yards. There is not much more expanding to do in the private shipyards, so far as our combatant ships are concerned. We have still quite a little to do in the navy yards. The principal expansion to take place from now on must be in subcontracting and manufacturing plants.

Acting Chairman MEAD. I understand that there are a number of shipyards and ship-construction facilities in the country that are not being used. Do you know of any?

QUESTION OF IDLE SHIPBUILDING CAPACITY

Admiral ROBINSON. There may be, sir. I can tell you what we have done in that respect. We have had the district commandants make a survey of every single shipbuilding facility in the United States. They have made comprehensive reports on those yards, as to the ability of them to perform work for the Navy, and any other branch of the Government that uses shipbuilding. Now, of course, we must differentiate between the building of large ships and the building of small boats or small ships. In regard to the building of small ships, we haven't got now and we never have had enough yards to handle, as we would like to handle, the building program that is now visualized by the Maritime Commission and the Navy Department. As regards the building of small boats and small ships, the condition is just the reverse. There are many small yards around the country which could build small boats, for which we do not have work. For example, we placed contracts for about 300 small boats of one class or another. Some of them were pretty good size. They got up to a total cost of somewhere between one and two million dollars, in a few instances, but, generally speaking, they ran around a quarter of a million or half a million dollars apiece. We placed those literally around the entire United States, from the Great Lakes right around the east coast, the Gulf, and the west coast; but we found that for the 300 ships, or thereabouts, that we placed, there were 150 yards that would be capable of doing this work. You will see right off that that is only two boats per yard, if you awarded it to each one of them. We didn't do that. We got competitive bids from all of these yards, and we took those yards which offered the best form of contract for the Government, and we negotiated a price with them which was, in all instances, lower than the bid they had submitted, and placed them on that basis, but we could place right now a great many more small boats, such as subchasers and patrol boats of all kinds. We could place a great many more boats than we have authorized or for which the needs are obviously going to be pressing.

I make that distinction because I think there has been a good deal of misunderstanding around the country on that subject. In other words, when we have such a pressing demand for such ships as destroyers and submarines and light cruisers, and things of that kind, it hasn't been at all clear why we haven't utilized some of the small boat plants around the country. They are not at all suitable for the work that I am talking about, but as far as the large shipbuilding facilities of this country, I don't know of any that aren't being utilized 100 percent.

Acting Chairman MEAD. So far as the larger shipyards are concerned?

Admiral ROBINSON. Yes, sir. Now, when you get down to building small boats, why, this country certainly has an enormous number of them. There are several hundred of them. I said 150 that were suitable for the type of construction that we talked about, but we actually examined something between 500 and 1,000 small yards.

Acting Chairman MEAD. I know nothing about these particular instances, and I am not concerned with them except as they may fit into the defense program, but I presume every Senator has the same experience that I have—

Admiral ROBINSON. I am sure they have.

Acting Chairman MEAD. That only recently two firms located on the Great Lakes called upon me and explained that they were unable to get Navy or maritime contracts and that they were able to build small ships. I remember the name of only one of the firms. It seems to me it was the Niagara, but I know there were two different groups. Recently a group called on me from Albany, N. Y., where the shipbuilding facilities are under a local governmental agency, the Albany Port Authority. They explained they were unable to get contracts, and they just completed a 10,000-ton tanker up there for some private shipbuilding company. Then, a shipbuilding facility that was used during the World War at Newburgh, N. Y., if I remember the location correctly, was brought to my attention; another one in Connecticut, which is perhaps located on Long Island Sound, has been brought to my attention, and I verified it by contacting the Maritime Commission, and they said the facility was there and that it wasn't being used, and I understand there are about 8 or 10 ways that have been constructed by the city of New York on Staten Island, 7 or 8 of which could be used for ship repairs and for facilities of that type. They are not being used. Now, if that is true all over the United States, we certainly are not using our shipbuilding facilities to the nth degree, and it may be possible that we are concentrating on some of the larger shipbuilding enterprises so that we will just be blanketing them with contracts which they won't be able to get out until the emergency is over.

Admiral ROBINSON. The point about that is, sir, that the shipbuilding facilities you refer to are not at all suitable for building naval ships. They have all been investigated, every one of them, and if they had been suitable I certainly would have used them, because we were in some cases desperately seeking places to place this work, and we have investigated every single facility for shipbuilding in the United States. Now, take some of those that you mentioned specifically, the one at Albany; we talked to the people who have that concern just recently, and they told us specifically and categorically that they could not take on any of our work.

In regard to the Newburgh plant, Newburgh is not in any sense a shipyard. It is a shipyard that was used during the last war; it is in a complete state of disrepair. To use that place would amount to building a new shipyard and providing it with completely new management and everything else, which doesn't exist.

Acting Chairman MEAD. They tell me they built these destroyers during the World War.

Admiral ROBINSON. Yes, sir.

Acting Chairman MEAD. And they have all the facilities except the surface machinery?

Admiral ROBINSON. Yes, sir; but let me assure you, Senator, that that is not correct. We have investigated Newburgh thoroughly, sir, and the decision not to use that place was a very well considered one, and there is very little at Newburgh that would be of any use in putting up a new shipyard, and to man a new shipyard at Newburgh, the management for it would have to be drawn from other shipyards, and the sum total of the result, as I have stated repeatedly to people who have discussed not only Newburgh, but everything that I say in regard to Newburgh applies to at least a thousand other locations in the United States which have been equally stressed, is that to attempt to utilize those places would result in a very definite slowing down of the building program, and not a speeding up. The whole question of the shipbuilding program was considered solely from the point of view of what was the quickest way to get results, and I am sure I have discussed this many times with various other people who were interested in shipbuilding, such as the Chairman of the Maritime Commission and other people, and we are all in accord that up to the present, at any rate, any attempt to put up new shipyards would not only not result in expediting the shipbuilding program, but would definitely result in slowing it down.

There is another point to be considered in connection with that. As I stated a moment ago, at the present time the limit on shipbuilding is not at the shipyards. It was in the beginning. We built the shipyards up. We built up the three shifts. We are working three shifts now in all the shipyards and in all the navy yards. Having done that, we have definitely shifted the place that we have got to work on next, out to the people who are supplying the materials, and until we can build up the rate at which we can get steel, turbines, gears, and so forth, for these ships, we can't expedite any more than we already have done in the present program. It is very difficult, Senator, in making a decision what to do about facilities. Anyone who isn't familiar with shipbuilding as an art may not realize that a shipbuilding plant is more than just some ways and some shops and so many people. It is a team that has been working together for a while, and even if you had people available, which there aren't, you can't just throw so many shops and so many ways and so many people in a place and say, "This is a shipyard." It takes those people about a year to get to working together, working as a team. You have to draw them in from all the other available places, and I could bring you in here practically all of the prominent shipbuilders in the country and they will tell you that the new activities that have been started, which it was felt must be started, have depleted very much their management, to such an extent that it has interfered with the progress of ships in their plant. That was done deliberately, because we felt we had to go so far in starting up new plants, but we didn't want to start up new plants, for example, right alongside of old ones.

Where we wanted to start a new plant, we wanted to go into an area where there was new labor and where, as much as possible, it wouldn't interfere with those that were already under way. And you will notice that practically all of the shipyards, new shipyards, that have been put up—the Navy Department has only put up two, really,

actually only one, the Consolidated plant at Orange, Tex.; the Todd plant in Seattle is a new plant, but an old organization just moved over to a better place and put up new facilities, so in that sense it wasn't a new yard. But the Maritime Commission has put up a number of new yards, and you will notice that they have put them all into parts of the country that didn't already have existing shipyards. Many of the places that have been mentioned, such as New York and Newburgh, and various places like that, it would be very bad to start new shipyards because of the fact that there is already so much activity going on in those places. In fact, we are beginning now to get directives from O. P. M. not to put up any more national defense facilities of any kind in certain areas, and, of course, the industrial East is the place that is getting most of this work. I would like to assure this committee that every single facility in the United States has been thoroughly considered, and where it is not being used, it is because we considered it was not in the best interest of national defense not to use it; that we would get more work done at less expense by doing it otherwise.

Acting Chairman MEAD. I presume the method that you have adopted and that which has been approved by the Maritime Commission is the correct one, but I merely mentioned these experiences that we all meet with to make sure that they have all been considered. In the case of Newburgh, which I am not at all interested in personally, the party who called upon me—I just vaguely remember him—was a shipbuilder at the Norfolk Navy Yard for many years, and he told me that he had the personnel and that it was a shame to allow this concrete shipyard to go to waste when there were a great number of skilled workers in that neighborhood who had worked there during the World War who were denied employment in the Navy because of their age and who were denied employment in building ships by private enterprise because of their age, and yet men that he thought had 10 or 20 good years left in them. I put the question up to him just as you put it up to the committee, and he said that he had an answer for all of those.

Admiral ROBINSON. Yes; he told me the same thing, sir. I think I talked to everybody who has had any interest whatever in Newburgh. I think I have talked to at least 20 different parties connected with the Newburgh proposition, and they told me the same thing that they have just told you, and some of them told me that they had complete management for the navy yard, but that, of course, is not correct. It is just not intentionally a misstatement, but you know it is very easy to make general statements which on close investigation won't hold water. The facts are that there aren't any people in the whole United States at the present time who are really skilled in the art of shipbuilding that aren't employed in that somewhere or other. I mean people in the management status now. I don't mean mechanics. There are undoubtedly some mechanics. But there have been a number of shipyards where we placed contracts where we thought the management was rather weak and where we both had to bolster it up, and where we have personally gone out and attempted to get somebody of good capacity to put into those jobs, and we have had the greatest difficulty in doing it, even where we only wanted to get two or three

people. It has been with the greatest difficulty that we have been able to get such people.

Now, the shipbuilding fraternity has just been spread thinner and thinner until you can almost see through it now.

Acting Chairman MEAD. Admiral, are you familiar with the city-owned piers at Staten Island?

Admiral ROBINSON. The city-owned piers?

Acting Chairman MEAD. It seems to me they have them. It seems to me the city owns 10 of them there, and they are only using 2 or 3 of them. They are very large. The capacity seems to be adequate for the biggest ships, and it occurs to me that they could be used to relieve shipyards by doing surface repair work.

Admiral ROBINSON. Well, we have just completed, Senator, a round-up of all the repair facilities in the country, and I will investigate the point that you mentioned. It may be that we have them under a different name or a different category. I don't happen, at the moment, to know of them as you have described them, but the question of piers in New York to be used for repair facilities is quite a pressing thing right now, and if it is a fact that there are piers there which we could use for repairs, we will certainly try to get hold of them.

Acting Chairman MEAD. Our interest is only in seeing to it that every available facility is brought into this national-defense program.

Admiral ROBINSON. We welcome all information on that subject, and I am just delighted to know there is a possibility of finding an idle pier in New York that we can get hold of. We have been trying to get hold of all piers we could, even to the extent of using those embarkation piers in Hoboken.

Acting Chairman MEAD. The last time I was up to the location of these piers, it was for the purpose of attending a sort of picnic or a luncheon of some kind which was held on one of these piers. I understand that it has been used for quite some time as a recreation pier because when built it was found not to be in demand, and I understand that there are still seven or eight of them that are not in demand. At any rate, I am not personally concerned, but I am generally concerned with the defense program, and these happen to be the only facilities that come to mind, only because they have been brought to my mind by others.

Admiral, if we may just get some idea of the proportion of naval construction in private yards as compared with the construction in navy yards, in public-owned yards—what is the situation?

RATIO OF PRIVATE TO NAVY YARD SHIPBUILDING

Admiral ROBINSON. At the present time, the bulk of our shipbuilding program is in private yards.

Acting Chairman MEAD. When you say "the bulk," what do you mean?

Admiral ROBINSON. Just a moment. I am glancing here to see. It is about 70 percent in private yards and 30 percent in navy yards on a dollar basis, I would say.

Acting Chairman MEAD. Seventy to thirty?

Admiral ROBINSON. About that; yes, sir.

Acting Chairman MEAD. Years ago, if I remember our appropriation debates on the naval bill in the House,¹ it was around 50-50.

Admiral ROBINSON. That is correct, sir. The law requires that we place at least half of our work in navy yards unless the President authorizes us to do otherwise in the interest of national defense or in an emergency of some kind, which, of course, in this case it was necessary to do. What we had to do was to use all the available facilities everywhere, both navy yards and private shipyards, and it just so happened that there were a great many more facilities available in the private shipyards and also that they were capable of somewhat greater expansion.

Acting Chairman MEAD. So that you used all available facilities and then inaugurated an expansion program?

Admiral ROBINSON. At both places.

Acting Chairman MEAD. And the expansion program was larger as it applied to private shipping than it was as applied to publicly owned yards?

Admiral ROBINSON. That is true; yes, sir.

Acting Chairman MEAD. Was that decided upon for any good reason?

Admiral ROBINSON. Yes, sir; it was; for the reason that it had to be that way. There was much more capacity for expansion in the private yards than there was in the navy yards. The navy yards, of course, did have another limitation, and that was that we had to reserve—I am talking now about building capacity—a certain amount of the navy yard for repair work. But aside from that, on the question of expansion itself, we have expanded all of the yards, both private and navy yards, as much as we thought we could do. On the question of where to put additional facilities, we weren't facing the problem of whether it was better to do it here or there; it was where you can do it at all anywhere. That is what decided that question. After all, the size of the naval yards and the location of them, and so forth, and, of course, private yards, too, does prescribe a limit to what can be done there, and we have done about all that could be done. In fact, in New York, as you know, we have acquired the whole adjacent market area there in order to put up new buildings. We had to do it, and it was one of the places where we could do that.

Acting Chairman MEAD. In all of the expansion program, whether it is public or private, the Navy subsidizes it; that is, it comes out of the naval appropriations to a great degree, doesn't it?

Admiral ROBINSON. Almost entirely; yes, sir. You are talking now about the shipyards themselves?

Acting Chairman MEAD. The expansion program of the shipyards.

Admiral ROBINSON. Of the shipyards themselves and not the subsidiaries—I don't mean subsidiaries, but subcontracting manufacturers.

Acting Chairman MEAD. That is right; yes, sir.

Admiral ROBINSON. That is true; yes, sir. The shipyards have been expanded under various types of contracts, but in all cases it has been—eventually it will have been—Navy money that expanded them. You are familiar, of course, with the various types of contracts under

¹ Senator Mead was formerly a Member of the House of Representatives.

which those plants have been expanded. In some cases, the Government made the expansion directly and owns the plant wholly and outright. In other cases, the R. F. C. has put the plants up and furnished the money to do it, but the Navy will eventually have to reimburse that contract. In other contracts, the E. P. F. form of contract, the shipbuilder has put up his own facilities, and he, in turn, is reimbursed over a period of 5 years by the Navy. But the result is the same actually in all three cases, which is that the Navy will have put up the facility and will also own it. The final disposition, of course, is left to the future.

Acting Chairman MEAD. But in the case of the expansion of the public navy yard, that is a 100 percent investment that we will always control.

Admiral ROBINSON. You mean in our own plants?

Acting Chairman MEAD. Yes.

Admiral ROBINSON. Oh, yes; there is no string on that at all. That is simply continuing.

Acting Chairman MEAD. Expansion in private yards may ultimately all slip away from us back into private hands.

Admiral ROBINSON. Absolutely; that is perfectly true. Of course, actually, as far as national-defense assets are concerned, we never have differentiated much between navy yards and shipyards. We use them both in about the same way. Of course, the laws governing the contracts and all that sort of thing are different in the two cases, but actually we look on any shipbuilding plant as a national asset.

Acting Chairman MEAD. Yes, but—

Admiral ROBINSON (interposing). A national-defense asset, I should say.

COMPARATIVE COSTS OF PRIVATE AND NAVY YARD SHIPBUILDING

Acting Chairman MEAD. But we must always endeavor to practice economy and get more for a dollar than we have heretofore, and we must improve these assets. What is the difference between the private shipbuilding asset and the public shipbuilding asset insofar as economy of construction of ships?

Admiral ROBINSON. Well, Senator, that is a subject that has been debated ever since I have been in the Navy, and I have never known any two people to agree on it. It is so difficult to compare costs of ships in private yards and in the navy yards that it is impossible to arrive at any really accurate decision in the case, because it depends on what you are trying to find out. In the navy yard we charge against the ships what we call the appropriation charges, that is to say, we appropriate money to build that ship. Now, the people who build the ship, that is a great many of them, the officers and supervisors and planners and all those people, who supervise the building, are paid out of entirely different appropriations. That doesn't go against the cost of the ship at all. There are lots of charges that go to other bureaus, such as Bureau of Yards and Docks, and the Bureau of Supplies and Accounts, who have to do with the upkeep of docks and who have to do with the distribution and the issuing of materials and all that sort of thing. Those aren't charged against the cost

of the ship. So that when you get through, in the case of a navy yard ship, you have a block of costs there which give you the appropriation charge. That is all it gives you. Now, in the case of a private shipbuilder you have the contract price. That is what you paid him. Now, out of that contract price he pays taxes, he pays insurance, he pays the various Social Security Act costs, and things of that kind, and then he gets a profit presumably, which goes back to the stockholders.

I really don't see how it is possible to make much comparison between the two cases unless you know definitely beforehand just exactly what you want to find out by the comparison.

Now, there is no doubt about it, ship construction at navy yards has vastly improved over the last 15 or 20 years. There is no question but that a good many years ago naval construction at navy yards was nowhere near as efficient as it was at private shipbuilding yards, but over the period since the last World War we have done a great deal of naval construction at navy yards, and we have gradually built up a very fine technique and morale, and we have entered into a highly competitive spirit, and the result is that our navy yards are now on a very highly efficient basis. I think it compares very favorably with private shipyards. In other words, I think that we have certain shipyards and certain navy yards that are excellent in their work, both of them, and I would say they are about on a par with each other, and possibly there will be occasionally some navy yard or some shipyard that will have a slump and they won't be as good as the rest of them; but, generally speaking, I would say that the shipyards and navy yards at the present time are on about an even basis so far as efficiency of construction is concerned.

Acting Chairman MEAD. Well, Admiral, hasn't the Navy an agency or a bureau that compares with the Cost Ascertainment Division of the Post Office Department, or a similar division of the Agricultural Department or the Interstate Commerce Commission, so that they could give us a comparative cost of the construction of two battleships of equal tonnage, one in a private yard and the other in a public yard? It occurs to me that in view of the fact that we know the contract price charged by a private yard and we can compute the bonus, if any, giving us immediately the total cost of the ship, we ought to be able to compute the price of a similar ship in a public yard by including the appropriation for that ship or the money used out of an appropriation for that ship, and overhead and supervision and other costs that would be applicable to the construction of that ship.

Admiral ROBINSON. Well, it would be necessary first, Senator, to define just exactly what you want the comparison for, and having done that, I think it is possible that the records of the Navy might be such that that particular answer could be found, but our records are kept, of course, for a specific purpose, and that is to keep track of the appropriations that are given us by Congress. Those appropriations are for a specific purpose. For example, we don't take yards and docks money, which is for the maintenance of the piers and docks and other things around the navy yard, and charge any of that against the cost of building a ship. The general storekeeper who handles the materials in the navy yard and the distribution of them and the

cost accounting on them, and all of that we don't charge against the cost of the ship, because that is covered by a specific appropriation. The pay of officers, the pay of many clerks, and all of that sort of thing in the navy yard, is under a specific appropriation for a different purpose and it is accounted for, and very accurately, of course, under those conditions. Almost any record you want can be obtained, but it will have to be pretty specific as to just what is wanted. We haven't been keeping our records that way, you see. Naturally, the records of the Navy Department are kept to account to Congress and the Bureau of the Budget and other people, the Comptroller, as to the way our funds were spent. Of course, in the shipyard, everything spent in that shipyard goes against the cost of the ship, whether it be taxes or contributions to the Community Chest or whatever it may be.

Acting Chairman MEAD. However, Admiral, it occurs to me that our critics who may in the future be delving through these records will not be satisfied with the confusion that we are writing into the story about the relative costs of the building of a ship in private and a similar ship in public yards. Now, it is a much more difficult question to determine the problem that is presented to the Interstate Commerce Commission. It is a far more difficult problem that confronts the Cost Ascertainment Division of the Post Office Department, who must take an article of mail in the third class and determine the cost of delivering that mail after picking it up at New York, to some post office in California, as it works through the air or the train or the letter carrier's bag, along with first-, second-, third-, and fourth-class mail. Yet they are able to tell you what the first-, second-, third-, and fourth-class mail may have cost the country and the taxpayers. What we would like to know is this, How much does it cost to build a battleship at Norfolk, at Charleston, or at some other navy yard, and how much would it cost to build exactly the same ship at Cramp, or at some other private yard? It seems to me that the Appropriations Committees of the House and Senate and those that will read our records should know what all these ships cost and what was the difference between the cost in the public yard and in the private yard, and I believe that we should be fair and charge not only the immediate appropriation for the ship, but the maintenance of the yard, the cost of supervision, certain clerical charges from the Department, that probably has to do some work in connection with that ship, and all the charges that might be properly applied in that particular instance.

I think we ought to know that we can build a ship in the public yards, for, say fifty million dollars, and we could build the same ship in a private yard for \$48,000,000 or \$52,000,000, or whatever the case may be.

Admiral ROBINSON. Well, Senator, you used the term "the confusion that exists" in regard to this.

Acting Chairman MEAD. That will be in the mind of the reader of this.

Admiral ROBINSON. Possibly so, sir; but I don't think there is any confusion about it at all. We are merely facing the facts. The fact is that Congress has set up a system of appropriations for which the Navy is responsible and which it must follow, and there have been a good many people in the Navy who from time to time have advocated

a lump-sum appropriation for the Navy Department, and in that case there would probably have to be a different accounting system. But we have, as you know, a very large and extended accounting system throughout the whole Navy. It is in every navy yard, in every industrial establishment, and everywhere else. That accounting system is built up for the purpose of supplying information to Congress and everybody else who is concerned with the disbursement of funds, and that produces that result.

Now, to produce the result that you have in mind would require an entirely different accounting system. It can be done, I grant you. It hasn't been done because in the past the Bureau of Supplies and Accounts has had great difficulty, of course, in getting enough people to maintain the accounting system we already have. This would be an absolute duplication of the type of accounting that we do now. We do what is called appropriation accounting, with which you are quite familiar, of course, and it is entirely different from getting actual cost, which would be comparable with the commercial establishment. It is only in comparatively recent times that the Government has been in business, to any very large extent, and therefore the records of the Navy Department, going back over many, many years, are not in the form which is comparable with commercial purposes at all. Commercial concerns exist for the sole purpose of making money, and they keep their books on that basis.

The Navy Department exists for the sole purpose—that is, its accounting system—of keeping Navy expenditures within the appropriations, and they just aren't parallel at all in any respect whatever. What you say is perfectly true. It is possible to arrive at those costs. It, however, is not a simple undertaking by any means, and it would involve, of course, the elapse of a long period of time. If Congress wants to institute that for the purposes of comparison directly with commercial costs, that can be done, and the system can be set up to take care of it. There isn't any doubt about that at all. But it will be an entirely different thing from what we are doing now.

Acting Chairman MEAD. Admiral, it isn't a criticism.

Admiral ROBINSON. I understand that, sir.

Acting Chairman MEAD. But it occurs to me that in addition to the reasons for the accounting system of the Navy, which is to keep a record of the appropriations and to see to it that the appropriations are disbursed according to law, and so on, that there ought to be another reason there. The accounting system ought to assert as to whether or not the Navy is getting a ship more economically in the navy yard as compared with a similar ship in a private yard. It seems that every accounting system that we have in the Government ought to have its eye on the economy of the transaction.

Admiral ROBINSON. Of course, we do enter records for comparison with navy yards. The costs are all on a comparative basis. For instance, if we make a steel casting at the New York Navy Yard and that casting is to be used at the Portsmouth Navy Yard or the Boston Navy Yard, it is billed to that navy yard at a certain specific cost, and that is absolutely accurate cost, too; but it isn't the kind of cost that a commercial manufacturer would use to sell it at. It is based on existing laws and appropriation charges, and all that sort of thing.

Now, what you are speaking of can be done. It will be quite expensive, and if the good that can be obtained by it is desirable, then it

should be done. Then, of course, if we are going to do that, we should do it openly and Congress should establish that system and should set up the appropriation to cover it, and so forth, so that the Congress will know, for comparative commercial reasons, whether it is better to do work at Government navy yards or private shipyards.

When the law was passed to do half of the work at Government shipyards and half of it in private shipyards,¹ it wasn't based on any question of economical work at either place so far as I know. It was just a matter of national policy and was set for reasons many of which had nothing to do with cost at all, and many of which I don't even know anything about, with which I am not familiar. They are in fields that I don't have anything to do with. But I still think that in all plants where Government manufacture is carried on, where, for example, at Portsmouth we manufacture electrical fittings, and we manufacture chain cable; we make steel castings and everything you can think of, almost; we have a perfectly good system of accounting. We don't sell those things to private manufacturers; we manufacture them for ourselves, and we sell them from one navy yard to another, and our system of accounting is for the purpose of getting the appropriation charges on these things so that they can be billed at the right cost. But whether that cost is comparable with one which you would get from a manufacturer where you went out and bought it, is something else again. It just isn't.

MR. FULTON. Do you mean, then, Admiral, with respect to the \$3,500,000 that the Navy has been expending for private shipping, that we don't know whether we could build it for less or more money in the navy yards?

Admiral ROBINSON. If you will clarify your question, Mr. Fulton, by saying what kinds of cost you want, I can answer it.

MR. FULTON. For example, take a battleship.

Admiral ROBINSON. If you mean appropriation cost, if you mean appropriation cost of the battleship, I don't think there is a great deal of difference. Sometimes we build them cheaper at private yards and sometimes we build them cheaper at navy yards.

MR. FULTON. You built two battleships recently, one in a navy yard and one in a private yard; did you not?

Admiral ROBINSON. Well, the one in the private yard isn't quite finished; it will be very shortly. We built two in navy yards and they are finished; they are both in commission.

MR. FULTON. How did those prices compare as to private yards as against navy?

Admiral ROBINSON. Oh, with the contract price, yes; I see what you mean. The navy-yard costs are, for the *North Carolina*, about \$52,900,000; for the *Washington*, about \$50,912,000; for the *Massachusetts*, which was built in a private yard, \$59,702,000; for the *Indiana*, built in a private yard, about \$61,323,100; for the *South Dakota*, about \$62,987,780.

MR. FULTON. Now, with respect to those, that would be a difference of, roughly, about 8, 9, or 10 million on both.

Admiral ROBINSON. That is about right.

¹ Public, No. 726, Seventieth Congress, the so-called Authorization Act of 1929, which provided that the "first and each succeeding alternate cruiser, upon which work is undertaken, shall be constructed in a navy yard." Compare sec. 2 of the Vinson-Trammell Act of March 27, 1934 (48 Stat. p. 503).

Mr. FULTON. Does your earlier testimony mean that the Navy's accounting is set up in such a way that you don't know when these extra charges that are performed by, say, Yards and Docks, and other independent departments of the Navy, that is independent of the Bureau of Ships, are equal to or greater than or less than this eight- or nine-million-dollar differential?

Admiral ROBINSON. I think there is no question but that we don't know that answer, Mr. Fulton. The accounting system in the Navy Department is not built up on that basis at all. It could be done, I will grant you that, but it isn't done.

Mr. FULTON. Of course, I understand that one of the primary purposes would be to account for the appropriations.

Admiral ROBINSON. It has to be.

Mr. FULTON. But there also is a very definitely important factor of knowing whether you are engaged in an economical or an uneconomical operation.

Admiral ROBINSON. Well, the answer to that is, Mr. Fulton, that we do know whether we are engaged in an economical or otherwise operation, because we compare navy yards with each other, you see. But aside from that, as you well know, the question of peacetime costs of running the Navy has always been scrutinized very carefully, and I think you will find that the Bureau of Supplies and Accounts has sufficient difficulty in getting enough accountants to run the present system of accounting in the Navy without duplicating it. What you are requiring there would be a duplication, because all the costs that are now kept would have still to be kept, but kept in a different form, don't you see?

Mr. FULTON. I don't know, Admiral. I have never examined your accounting system.

Admiral ROBINSON. It would double your accounting.

Mr. FULTON. In private accounting, even though the company is interested in the accounting for one primary purpose, it is usually found possible to keep the accounts in such a way that you could use the accounts for several different purposes.

Admiral ROBINSON. We do that.

Mr. FULTON. Well, in that connection, was it found impossible or was it never attempted to be set up to keep the accounts in such a way that you would know how much it cost to build a battleship?

Admiral ROBINSON. It wasn't set up, because we don't have the people to do it.

Mr. FULTON. I mean, did you find that it would take a definitely larger force?

Admiral ROBINSON. I can answer that as exmanager of a navy yard for 4 years, and during that time I had the greatest difficulty in keeping up my current accounts with the accounting force that I had. We had, of course, ships in the navy yards for repairs at the time, and I had to know absolutely daily the situation that existed on every one of those ships in regard to the amount of money I was paying on it. In addition to that, we were building a cruiser for which we kept accounts, and we kept them all on a strictly appropriations basis. Now to have to set up the system that you have in mind would just have doubled that work. It wouldn't have been possible.

Mr. FULTON. You can keep it on a proper appropriation basis, but have a break-down within your appropriation basis.

Admiral ROBINSON. But it will double your work to do it two ways. We haven't, so far, had the force to do that. In fact, Congress has never asked us to do it. If Congress wants the Navy to do that, then of course Congress will provide the funds to do it with, and the Navy will carry out the order.

Mr. FULTON. Has the Navy ever asked the Congress for permission to do that?

Admiral ROBINSON. That I can't answer, because, of course, I have only been in Washington a limited time and I am not responsible for the accounting system, so I am afraid I can't answer that question. But I can say this much, Mr. Fulton, I know that getting funds in time of peace for any purpose is a very difficult matter, and the accounting force, like all other forces, is kept at the absolute minimum to carry out the bare necessities of the law.

Mr. FULTON. Does the Navy know how much the accounting force costs?

Admiral ROBINSON. Oh, yes, it does. I don't, but the proper person, Admiral Spear,¹ can tell you how much it costs.

Mr. FULTON. I would like to have, for the record, the amount of the cost of the accounting which is incurred.

Admiral ROBINSON. The total accounting in the Navy? I can get that figure from him and insert it.²

Mr. FULTON. Has there been any test-check accounting on any given ship? In other words, if you don't keep it as a regular thing, have you ever test-checked to find out what the cost would be as to a particular vessel for purposes of comparing and finding out your efficiency?

Admiral ROBINSON. Comparing it with what?

Mr. FULTON. With contract price to private enterprise.

Admiral ROBINSON. Oh, no, sir.

Mr. FULTON. Of a similar vessel.

Admiral ROBINSON. No, sir, it hasn't; because of course to do that would involve just what I have been talking about all morning here.

Mr. FULTON. As to one vessel?

Admiral ROBINSON. We just don't have the people to do it. Our accounting force has been pretty hard put to it to keep up with the things that it is required to do by law, and to get in the reports that we are required to by law, and we haven't had anybody available to do anything else. As a matter of fact, the Paymaster General does make up a report on cost in which he attempts to set up a whole lot of imaginary things like statistical overhead, and so forth, which would have some bearing on what we are talking about here, but that figure, in my opinion, is very questionable. It would raise these figures that I have given you here a very considerable amount. When you are asking for accurate information, I think the best information I can give you is simply to say that until somebody defines exactly what they mean by costs of naval ships and private ships and gives the Navy Department a directive to ascertain that cost and furnishes the money

¹ Rear Admiral Ray Spear, Chief, Bureau of Supplies and Accounts, United States Navy, whose testimony before this committee appears in Hearings, Part 2, pp. 402-403.

² Subsequently supplied and included in the appendix on p. 1507 et seq.

to pay for it, that all I can say at the present time is that from personal observation over a long period of years, I believe that shipbuilding at private yards and navy yards is about on an even basis, that they are both very efficient at the present time.

Mr. FULTON. I was going to come to that. If they are on an even basis, that is, if Government through the operation of the navy yard can as economically produce a vessel as is the case in the private yard, then I suppose one way in which you could ascertain the lessened price of constructing in the navy yard would be to take the profits of the shipbuilding company, which would be superimposed on this equal efficiency of the two different yards.

Admiral ROBINSON. Yes; that is right. Profits and various other things, such as taxes, for example, and contributions of one kind or another. That is what I had in mind when I said "define the difference."

Mr. FULTON. Then there would also be, I suppose, a somewhat higher salary rate than would be paid to, say, naval officers.

Admiral ROBINSON. That is right.

Mr. FULTON. So that you would find, if there is equal efficiency, that it costs more to produce a ship in the private yard by the amount of that profit plus excess salaries, plus taxes, and various other things which the private yard has?

Admiral ROBINSON. Well, of course, that is perfectly true, Mr. Fulton. You are getting into something that is a little over my head now, because, of course, in the one case we have a big capital investment which is put up by private owners, and what you have to compare that with I don't quite know. I think it is impossible to compare costs of Government construction and private construction in anything. It doesn't make any difference whether it is ships or anything else, because you are comparing two things that are as different from each other as a snake is from an elephant. They just aren't in the same category at all. You don't build ships at navy yards necessarily for the purpose of building them cheaper, and you don't necessarily build them there for any other reason. You build them there for various reasons, some of which are a matter of national policy, and that is something which, of course, the Navy Department has nothing to do with. It might be desirable to do all construction of every kind, no matter whether ships or anything else, in Government-owned plants.

Mr. FULTON. You certainly wouldn't unless the Government-owned plants were equally efficient.

Admiral ROBINSON. True enough.

Mr. FULTON. So that that is a basic thing that you have to look at.

Admiral ROBINSON. I conceive of a condition where it might be more desirable to build them in Government plants even if they weren't as efficient. It all depends on what you are trying to accomplish. But the question of policy, as to where ships are built or where anything else is built, is something, of course, which the Navy Department has nothing to do with; it is a matter of national policy, and it involves two schools of thought which range all the way from the fact that all Government work of any character ought to be done in Government plants and none whatever done in private plants, to the other extreme that all work should be done in private plants. Now, those are matters of national policy and we have nothing to do with them, but I don't

honestly think that it is possible to make a true comparison of this thing on a dollar basis. You can get any kind of comparison you want if you will only define your problem in advance, but some people think that it is desirable to have a place that you can tax, for example; other people think that the incentive of putting money into shipbuilding plants is worth something; other people think it would be much better to put all that into Government arsenals, and those are matters of national policy, and I am not a qualified witness to pass on that at all.

Mr. FULTON. On the matter of national policy, I believe you said earlier that the Congress had specified a national policy of 50-50.

Admiral ROBINSON. It has.

Mr. FULTON. And that that policy, of course, has not been affected in this particular emergency because of the 100 percent use of both.

Admiral ROBINSON. That is right.

Mr. FULTON. We now have, roughly, 70-30 percent, private yards having 70.

Admiral ROBINSON. That is correct.

Mr. FULTON. That raises, of course, the question of national policy, as to whether, since you say that the money that has been used to expand the private yards is, I believe you said, almost entirely Government money?

Admiral ROBINSON. Yes; that is right.

Mr. FULTON. It does raise the question as to efficiency, and that was what I was trying to ascertain, whether the Navy knows the efficiency.

Admiral ROBINSON. I think that efficiency you can judge much better than you can cost, because there are lots of straws that show how that wind blows—personal inspection of these plants, for example. We have supervisors of shipbuilding in all of the private shipbuilding plants. Those supervisors will themselves be managers of navy yards at some time or other, you see; and we have a constant interchange of personnel and a constant comparison of the two places, and anyone who has been in the Navy over a period of the last 40 years will know that while formerly shipbuilding in Navy yards was not at all comparable in its efficiency with private yards, I think at the present time it is definitely. I think we can say right now, without any hesitation at all, that shipbuilding in our navy yards is on a par with our best plants in the shipbuilding industry in the private institutions.

Mr. FULTON. That being so and the 50-50 policy having been adopted very definitely on the part of the Navy, there was an effort to have as much construction as possible take place in the navy yards, but by reason of the limitations of the yards, it was impossible to keep up the ratio, is that it?

Admiral ROBINSON. I didn't quite understand that question, Mr. Fulton.

Mr. FULTON. I mean that there would be then, as I understand it, since the efficiency would be equal, and since there was a 50-50 policy adopted by the Congress, there would be an effort, and there has been an effort, I take it, on the part of the Navy to have as much naval construction as possible take place in the navy yards.

Admiral ROBINSON. Well, no, not as much as possible.

Mr. FULTON. Up to the 50-50.

Admiral ROBINSON. Oh, yes, as a matter of fact, I think that the records will show that up until a few years back when this emergency started, that there was more than 50 percent in the navy yards as a rule. That was brought about due to the fact that we had a great many heavy ships in the navy yards; particularly was it true after we laid down the first battleships. All the first battleships of this new building program were laid down in the navy yards; until we got some in private yards it was quite an unbalance there. But, generally speaking, the navy yards have had at least 50 percent of the work up until about 2 years back, I would say, or something like that; somewhere around that, for a great many years.

Mr. FULTON. Well then, does it mean that the navy yards were less capable of expansion than the private yards?

Admiral ROBINSON. That is true, yes. In the first place, most of them were pretty well expanded already. I mean they had utilized most of the land they had, and there wasn't any easily acquired adjacent land for expansion, so that the navy yards were much more nearly expanded up to their limit already than were private yards.

Mr. FULTON. That was quite largely true, because they had been built in large cities in the earlier days and the surrounding territory had been built up quite extensively?

Admiral ROBINSON. That is quite largely true; yes, sir.

Mr. FULTON. Has the Navy, in selecting sites for any navy yards, had in mind the desirability or the possible necessity of expanding those yards in time of war?

Admiral ROBINSON. At the time they were selected?

Mr. FULTON. No; at the times that you have been selecting any new sites for any navy yards.

Admiral ROBINSON. We haven't selected a site for a navy yard, Mr. Fulton, in a long time. I don't recall when the last one was. The last navy yard built, I would say, was outside of Pearl Harbor. Of course, there was probably Puget Sound Navy Yard, and that was built before I graduated from the Naval Academy, so it goes back quite a ways.

Mr. FULTON. And it is because of that inflexibility, then, that this ratio has been changed to 70-30?

Admiral ROBINSON. Of course; I think if we had it all to do over again, we probably wouldn't place any of the navy yards in the exact locations that they are in now. We could undoubtedly find better ones, but they were selected many, many years ago for various reasons, and those reasons have long since changed or disappeared, and we have simply had to go along the best we could with what we had.

Mr. FULTON. That being so, when we are spending 500 millions for new facilities and are discussing a possible expenditure of another 300 millions, has any consideration been given to selecting what you say would be a better navy yard than the ones we have?

Admiral ROBINSON. That amount of money, Mr. Fulton, would go only a short distance toward providing new navy yards. I think it would be a mistake to try to build a new navy yard at the present time. Before you really got into complete operation, thoroughly equipped and all, the emergency would be well on its way toward an end.

We much prefer to expand the present yards, and we have done that. I would like to correct one impression there. You said we had ex-

pended 500 million and were contemplating expending 300 million more. Most of that 300 million will not be at any shipyard. It is for the expansion of auxiliary plants, most of it.

Mr. FULTON. That is subcontracting?

Admiral ROBINSON. Yes; by far the biggest part of that 300 million will be for the expansion of suppliers and not navy yards or shipyards either.

Mr. FULTON. I think somewhere around 350 million of the first 500 million was for shipyard expansion, was it not?

Admiral ROBINSON. I will put in the record that exact figure.¹ I have all of those. I don't happen to have them in my mind.

Mr. FULTON. Wouldn't it be possible for the Navy to expand an existing shipyard which would be purchased as a naval base just as easily as to finance the expansion of that by a company that wasn't even in business at the time of the emergency?

Admiral ROBINSON. There isn't any question but that the Government could purchase all these shipyards if it wanted to.

EARNINGS OF SHIPBUILDING COMPANIES AWARDED NAVY CONTRACTS

Mr. FULTON. What I have in mind is that I noted with respect to the Cramp Shipbuilding Co. that they hadn't been in operation since 1927 and that the Government spent \$12,000,000 providing new facilities.²

Admiral ROBINSON. That is perfectly true. The question of whether the Government should take over Cramp's is something that will have to be decided in the future, because most of the investment there is Government-owned. It is quite different.

Mr. FULTON. I asked the company to furnish its own estimate of the amount of its investment. It was only \$4,442,000.

Admiral ROBINSON. That is right.

Mr. FULTON. So the Government was furnishing somewhere around 75 percent of the total investment.

Admiral ROBINSON. That is quite true.

Mr. FULTON. That is, of course, an exceptional case because it was a brand new yard.

Admiral ROBINSON. But that again is a matter of policy. It wasn't necessary to decide it at the present time. Where there was available private management to run that yard, the decision that was made to let it be run by private interests, I think, was sound because it just brought in that many more people into the national defense.

Mr. FULTON. Of course, the bonus and fixed fee together would amount, as I understand it, to nearly seven and a half million dollars to be paid for.

Admiral ROBINSON. I imagine that is about right.

Mr. FULTON. To be paid for that company which only had \$4,400,000 investment. Now, would it be true that the navy yards wouldn't have personnel that could have taken over a defunct shipbuilding yard like the Cramp?

¹Under date of August 8, 1941, Admiral Robinson submitted a table showing the distribution of expenditures for the expansion of shipbuilding facilities between navy yards, private yards, and collateral industrial plants, which is included in the appendix on p. 1500.

²Mr. Fulton refers to a table, "Navy Cost Plus Fixed Fee Contracts," subsequently admitted to the record as Exhibit No. 85 and included in the appendix on p. 1495.

Admiral ROBINSON. I can answer that, Mr. Fulton, by saying that the Navy Department has the greatest difficulty manning the navy yards that it already has—the greatest difficulty. You see, the amount of work that is being done at navy yards has been expanded to such a degree that it has taken a great many more officers; not only that, but in ordinary peacetimes, we have a great many of what we call straight-line officers on duty at navy yards. They have nearly all been taken out and sent to sea, and we have had to replace them with Reserve officers and retired officers, and we are having the greatest difficulty in manning the existing navy yards. I should certainly be appalled at the thought of having to man any more than we are already manning.

But in regard to the Cramp's situation, what you stated there isn't quite the whole story. You see, a great deal of money had to be provided for working capital for that institution in addition to what they have invested there, and that was provided by the Philadelphia banks.

They are using that to meet their weekly pay rolls and pay for materials and all that sort of thing.

Mr. FULTON. You mean that in that interval between the time that they pay it to their employees and the time that the Government pays it back, the banks for a proper interest fee loan the money which you consider part of that investment?

Admiral ROBINSON. Yes, sir. It is a very necessary part of the system, though, because they have got to have, I think, about \$3,000,000 worth of working capital in order to keep that a going concern, because from the time they have to make payments, of course, on this material very often in the field, and by the time it is all cleared there is quite a time interval in there, and it does require quite a heavy working capital to carry on any such working program as they have.

Mr. FULTON. And does that interest, therefore, come out of their fee, or is it part of the cost?

Admiral ROBINSON. We haven't anything to do with the money for the working capital at all.

Mr. FULTON. So that it would come out of the fee, I take it.

Admiral ROBINSON. Yes; it would in effect come out of the fee. Interest is one of the items of cost that is not allowed. Now, there was some arrangement made, I don't remember exactly what, in connection with facilities that is a little different from that. But I am talking now about the regular working capital for running the shipyards. We don't pay any interest on borrowed money.

Mr. FULTON. You see, the Navy expansion has been up to a total of a billion five hundred million, whereas the private expansion starting from a figure which you said was less than the amount being done in the Navy, is up to three and a half million. So that it would appear that private yards have expanded at least twice as much as the navy yards have expanded.

Admiral ROBINSON. You are referring now to work or facilities?

Mr. FULTON. Work.

Admiral ROBINSON. Oh, yes; they have, vastly more.

Mr. FULTON. That being so, I wondered if the navy yards are being equally efficient.

Admiral ROBINSON. They couldn't take it, Mr. Fulton.

Mr. FULTON. Could they not if they had more skilled personnel?

Admiral ROBINSON. We gave everybody all the work he could take. The only criterion in this placing of work was the place where we thought the work could best be done. For example, we assigned certain classes of ships to certain yards, but in every case we assigned them all the work they could do and we expanded the yard to what we thought was about the limit it could be done efficiently; in all cases, private yards and navy yards, both. In other words, it is just a question of where it could be done. We were looking for some place to get it done, and in this case there was no choice, really.

Mr. FULTON. But what I was discussing was the question of personnel in the navy yards. Why is it that the private yards were capable of expanding more than twice as much with the same personnel as the navy yards could be expanded?

Admiral ROBINSON. I suspect that the navy yard personnel expansion is relatively as great as that of the shipyards. I will put that figure in the record to clear it up.¹

Mr. FULTON. You understand what I mean. It appears that the two forces being equally efficient, private yards started out with less than the volume of work that the navy yards had.

Admiral ROBINSON. Oh, but, Mr. Fulton, that is only a part of the story, you see. You see, we have put into commission during the last year all of the old Navy, almost. All that work was done at navy yards. That is in addition to this work—all the repair. There is an enormous amount of work. We actually had to stop new construction at the Philadelphia Navy Yard in order to put submarines and destroyers into commission.

Mr. FULTON. That, I take it, will explain it.

Admiral ROBINSON. That is the answer.

Mr. FULTON. That will explain where the disparity came.

Admiral ROBINSON. In both cases we have taken in all the personnel we could get hold of.

Mr. FULTON. That would explain that disparity, because I couldn't quite see why they could expand twice as much. If in addition you had a lot of repair and commission work, that explains it.

Admiral ROBINSON. That takes in all classes of vessels—repairs, recommissions, British and everything else. Most of the British repair work has to be done at navy yards because they are combatant ships and the private repair people can't handle it. Of course, the private shipbuilders can handle it, but not as well as our navy yard. Now, there is one subject you didn't bring up, but I will say that on repair work on naval ships, there isn't any question but that navy yards can do it better than anybody else. They are specialists in that line, and they undoubtedly handle naval repair work better than they can do it anywhere else.

Mr. FULTON. In peacetime?

Admiral ROBINSON. In time of peace, war, or any other time.

Mr. FULTON. In peacetime do they handle the bulk of it?

Admiral ROBINSON. Oh, yes; all of it in peacetime, and the bulk of it in wartime, as far as that goes.

¹ Under date of August 8, 1941, Admiral Robinson submitted a table showing the expansion of personnel under the present emergency shipbuilding program in both navy yards and private shipyards, which appears in the appendix on p. 1501.

Acting Chairman MEAD. Admiral, I noticed in the list of shipbuilding plants and contracts that I have here ¹ that the Federal Shipbuilding & Dry Dock Co. of Philadelphia has work the fees of which are listed as totaling \$1,090,000, and in addition to that, Federal has fixed-price contracts for 34 destroyers and 3 light cruisers. I was wondering if they had any additional contracts that are not listed here.

Admiral ROBINSON. You say the Federal Shipbuilding Co.?

Acting Chairman MEAD. Yes.

Admiral ROBINSON. At Camden?

Acting Chairman MEAD. Yes; the Federal Shipbuilding Co.

Admiral ROBINSON. At Kearny, not Camden.

Acting Chairman MEAD. Their fee work, according to this list, totals \$1,090,000, and in addition to that they have contracts for 34 destroyers and 3 light cruisers. They won't be able to get the work done on those destroyers and cruisers for a considerable length of time, will they?

Admiral ROBINSON. Oh, yes, sir; they will. In fact, that concern is making one of the best records in the construction of destroyers that we have.

Acting Chairman MEAD. What is their output of destroyers in any given length of time?

Admiral ROBINSON. At Kearney?

Acting Chairman MEAD. Yes.

Admiral ROBINSON. At the beginning of 1943, we will be completing destroyers at the rate of about 100 a year—about 100 boats a year in all yards at the beginning of 1943.

Acting Chairman MEAD. Federal has contracts for 34. How long will it take to finish them?

Admiral ROBINSON. I can give you that figure. The last of those destroyers will be finished the 1st of October 1943.

Acting Chairman MEAD. Admiral, in the meantime, I don't suppose you will be awarding any additional contracts—

Admiral ROBINSON (interposing). I hope we will not, sir.

Acting Chairman MEAD. For destroyers to that company right away if there are any other companies available for the work who could finish them prior to that date.

Admiral ROBINSON. That is perfectly true, sir, but there aren't any. If we have to build any more destroyers in the near future, what we will have to do is to award them to the concerns that are already building destroyers, so that they can order the same materials, duplicate their plant, duplicate their patterns, jigs, fixtures, and everything else, and simply tail them on to the present assembly lines so that they will come out 10 or 11 months after the last destroyer is finished now.

Acting Chairman MEAD. Are they all constructed according to uniform specifications and with mass-production methods?

Admiral ROBINSON. We are using that to the very greatest degree at the present time; yes, sir.

Acting Chairman MEAD. As time goes on, then, the costs ought to be reduced. Have they?

Admiral ROBINSON. They will be reduced; yes, sir. There is no question about it down to a certain point. After a while you get down

¹ Exhibit No. 85, appendix, p. 1495.

to the point where they run along about the same amount. That was all taken into consideration in fixing the price of these ships, of course.

Acting Chairman MEAD. I noticed here that Federal had two cost-plus-fixed-fee contracts for the construction of four destroyers, and they were canceled.

Admiral ROBINSON. That is right; yes, sir.

Acting Chairman MEAD. Is it more advantageous for the Navy or for the company to have these fixed-price contracts?

Admiral ROBINSON. We thought it was more advantageous for both. I might explain it, Senator. The reason they happened to have fixed-fee contracts there was because they were experimental types of destroyers. The contract plans and specifications weren't ready, and I wanted to place those contracts so we could get started on them. I intended from the very beginning to shift them over to fixed-price contracts just as soon as we could arrive at an estimate of what the cost was going to be, and that was done.

Acting Chairman MEAD. As a rule, Bethlehem and the United States Steel are not receiving any Navy cost-plus-fixed-fee contracts now. Is that right?

Admiral ROBINSON. No, sir; none of the large shipbuilders, none of what we call the old line shipbuilders, took on cost-plus-fee contracts. They all took on fixed-price contracts. They preferred that because—

Acting Chairman MEAD (interposing). They preferred it?

Admiral ROBINSON. They preferred it—well, for various reasons.

Mr. FULTON. In the case of these 34 destroyers, Admiral Robinson, are they the same as destroyers that are built in smaller numbers by some of these other companies?

Admiral ROBINSON. Yes, sir; in some instances. We are building the 2,100-ton type of destroyer, which is the same everywhere, except for these experimental ones. I mean everybody is using the same design, and that covers about five or six shipbuilding plants. In the size of the 1,620-ton destroyers, I believe we have two designs. One is being built by the Bethlehem plant, and one is being built by Federal and plants that are using their design. That was done merely in the interest of speed. That is all.

Acting Chairman MEAD. Speed and economy.

Admiral ROBINSON. Well, it will result in economy, yes, sir; but, of course, to be perfectly honest about it, the decision was made on the basis of speed in this case, because Bethlehem had built certain destroyers of this 1,620-ton type, and we could duplicate those more quickly than we could have shifted them over to a new design. The same thing was true of Federal and various other plants who were using the Federal design. So, we went ahead with those two types. For the 2,100-tonner, everybody used the same.

Mr. FULTON. Are the vessels at the smaller yards being constructed at the same price as these larger numbers that are being constructed at Federal?

Admiral ROBINSON. No, sir. The price varies at every yard. The price is not the same at any two yards. The best price we have for destroyers is at the smallest yard we have, and that is the Bath Iron Works.

Mr. FULTON. Is there any reason why Federal and Bethlehem couldn't build destroyers as cheaply as Bath, when they have large numbers of destroyers, through which they should be able to make economies?

Admiral ROBINSON. You are quite right, but that still isn't enough to overcome the differential between the Bath Iron Works and some of those other places. Bath Iron Works is located, as you know, in a small town, and wages are lower there, and standards of efficiency are higher, and morale is higher, and everything is better, and they just build ships cheaper. They always have. It isn't anything new. They have been doing it ever since I have been in the Navy, and for a long time before that. On competitive bidding, the Bath Iron Works has always been able to get whatever work it wanted because they were able to build ships cheaper, and they are still doing it.

NAVY YARDS, WORKING HOURS, AND PERSONNEL

Acting Chairman MEAD. That brings to mind a question that I have been pondering over for a long while. Why is it that the Navy has a Navy yard so close to the Capital. Why is it that with our crime problem, and our housing problem, and our personnel problem, the Navy keeps expanding its activities? Wouldn't it be in the interest of national defense and efficiency, as you have just explained in the case of the Bath shipbuilding facility, if we would follow the example of the marines, and locate a Navy yard somewhere within the protective area of the Capital and yet outside of the Capital city?

Admiral ROBINSON. You are referring to the Washington Navy Yard now?

Acting Chairman MEAD. Yes.

Admiral ROBINSON. Of course, I have nothing to do with the Washington Navy Yard.

Acting Chairman MEAD. I know, but I was wondering if you had any idea.

Admiral ROBINSON. It is really an ordnance manufacturing establishment, but I can say this: It is just the same category as all the navy yards, and that is that they were established there many, many years ago. The Washington Navy Yard was established by our forefathers. I don't even know when it was established, but a long, long time ago, and it has grown up gradually over the years. The invested capital is so great that I think we would all be appalled at the thought of any attempt to move it. That is the reason it is there. It is the last place that anyone would pick out in this day and time to put a manufacturing establishment, and you are quite right in that respect, sir, but you can't do anything about it.

Acting Chairman MEAD. It seems to me that all the agencies of defense are expanding their activities in the National Capital, and now, with the coming of bomber planes, it seems to me that the defense angle of the Capital ought to be given some emphasis.

Admiral ROBINSON. That is true, sir; but you can't do that in time of war, of course. You couldn't move the Washington Navy Yard.

Acting Chairman MEAD. Oh, no.

Admiral ROBINSON. It is a peacetime consideration.

Acting Chairman MEAD. It is a peacetime consideration, and then it is a consideration which the Navy, who has a record and reputation

of having plans long in advance of their ultimate need, should be considering.

Admiral ROBINSON. I agree with everything you say, sir, but whether anything can be done about it or not, I don't know. The location of the navy yard is governed by many things with which the Navy Department itself has nothing to do and no control.

Acting Chairman MEAD. I assume that the head of every department likes to concentrate all his activities right here in the Capital where he can go out occasionally and look them over proudly.

Admiral ROBINSON. Oh, no, sir.

Acting Chairman MEAD. Then the navy yard makes a nice place to anchor yachts. [Laughter.]

Admiral ROBINSON. The Bureau of Ships, on the contrary, sir, has almost no activity in the National Capital. In fact, I don't know of any that we have here other than laboratories and things of that kind. We don't have any activities in the National Capital.

Acting Chairman MEAD. You mean the Navy Department?

Admiral ROBINSON. No; I mean the Bureau of Ships.

Acting Chairman MEAD. The Bureau of Ships.

Admiral ROBINSON. And even the Navy Department has no great activity in the National Capital, sir.

Acting Chairman MEAD. Well, they cover a lot of space.

Admiral ROBINSON. I should say about 99.9 percent of our activities are located outside of the National Capital. I don't know whether that is too high a percentage or not, but not much. Even the Bureau of Ordnance, which has the Washington Navy Yard, has only a small fraction of its activities here. They have activities in every steel plant in the United States.

Acting Chairman MEAD. If you are drawing plans for the future any time during your spare time, I think you ought to consider the removal of the navy yard.

Admiral ROBINSON. I will vote for that, sir.

Acting Chairman MEAD. At any rate, getting down to speed, now, what about the operation of three shifts in the navy yard?

Admiral ROBINSON. Oh, we are operating three shifts in all yards, both private and navy yards.

Acting Chairman MEAD. And are these shifts uniform or are they one large and two small shifts?

Admiral ROBINSON. They are one large and two small shifts.

Acting Chairman MEAD. Why can't we have three large shifts?

Admiral ROBINSON. In my opinion, we will eventually have three large shifts. The second and third shifts will not be quite as large as the first shift for a number of reasons, but the second and third shifts will eventually be much larger than they are now. They are still being built up, and we haven't stopped building them up. But, as I said a moment ago, we have arrived at a point now where, with the existing forces, we are able to take care of materials just about as fast as we can get them. So, until we can speed up the flow of steel and turbines and gears into our shipyards, we can't expand the personnel a great deal more. There will be some expansion yet, but before the emergency is over, I hope to see those shifts expanded into very much more nearly uniform shifts than they are now.

Acting Chairman MEAD. What seems to be the present need, more skilled workers or a larger flow of materials?

Admiral ROBINSON. I would say it is 50-50. They are just about even now, and we have got to build both of them up parallel with each other.

Acting Chairman MEAD. Have you restricted age limits in the employment of skilled workers in navy yards?

Admiral ROBINSON. There are certain civil-service restrictions about employees in Government plants, of course. A great many of those have been waived. The exact details I don't happen to know at the moment, but I can insert it in the record to cover that point. But the civil-service regulations governing employment at navy yards have been very much reduced.

Acting Chairman MEAD. It seems to me that you ought to substitute physical examinations for age limitations. In other words, eliminate the limitations altogether, and just utilize the plan of physical examination.

Admiral ROBINSON. I will put in the record the exact waivers that we have made, Senator. I think we have done that. I know we have waived most of the requirements of the civil service, and I think we have waived all of them.

Acting Chairman MEAD. It would be well to let the older fellow take his share of this emergency.

Admiral ROBINSON. I am sure that he is, but I would like to give you an accurate statement about it, and I would rather insert it into the record.¹

Acting Chairman MEAD. All right, what about the maximum work-week in point of hours in the navy yard?

Admiral ROBINSON. Well, we are still trying to get by with a 48-hour workweek. We do quite a bit of Sunday work, of course, but usually it is done by staggering of shifts, or something of that kind, so that ordinarily the workweek isn't over 48 hours. There are exceptions to that, of course, but that is the aim.

Acting Chairman MEAD. I think it has been the experience in England that 48 hours or somewhere near that figure, is the maximum point of efficiency.

Admiral ROBINSON. Yes, sir. It isn't far from that.

Acting Chairman MEAD. A workweek of a greater number of hours proportionately reduces the efficiency of the worker. Now, what about Sunday work and holiday work and vacation work?

Admiral ROBINSON. That has not been resorted to as a regular thing. In other words, we aren't bringing in a full shift of workers on Sundays and holidays. We have brought in people on those days where they were required to clear up some bottleneck or something of that kind, but it hasn't been the general practice, and the reason for it is just exactly the one you gave, which is that what we are after, of course, is the over-all effect and not the effect of just 1 week or even 2 weeks. That is, that if you attempted to work people 7 days a week, eventually you wouldn't get any more out of them than you did working them 6 days a week. You would undoubtedly for a few months, but eventually you wouldn't, so what we are attempting to do is to get the maximum result over the long-time period.

¹ Under date of August 8, 1941, Admiral Robinson submitted a statement furnished by the Civil Service Commission in connection with the relaxation of age restrictions on workers in navy yards, which appears in the appendix on p. 1501.

SPREADING THE WORK OF NAVAL DEFENSE

Acting Chairman MEAD. Admiral, another point that seems important, I believe, is the desire of O. P. M. to increase this program to a \$40,000,000,000 one, and your expenditure requires a very substantial spreading of the contracts, diffusion of the work. The War Department has issued a directive that is really compelling on the part of the large contractor, prime contractor, to sublet or divide his contract. This directive, which was issued by Secretary Patterson, has had a good effect. It is spreading the work, bringing in the small contractor. What has the Navy done recently in that connection?

Admiral ROBINSON. We have done a great deal about it, sir. We are trying to do more. The Under Secretary has that subject under study at the present time. But I should like to say that automatically all of our work is spread out to the greatest degree anyhow. I mean even under normal conditions. Every State in the Union is working on battleships and other types of ships. There isn't a place in the United States, hardly, that isn't contributing something toward our naval-building program. That just takes place automatically. It is part of our system. We have been doing it for many years. We contract with a shipbuilder for a battleship. He, in turn, contracts with various subcontractors for turbines, gears, for steel plate or shapes or whatever it might be, and that subcontracting goes on and each time a subcontractor multiplies by 8 or 10, and you can readily see that when you end up the final contracts on those ships, there are literally hundreds of thousands of people who are subcontracting. That is a part of our system, and it is much simpler and easier to handle than the work that the War Department has, for example, such as the building of tanks and airplanes and all that sort of thing. Our system, having been worked out in normal peacetimes on the subcontracting basis, doesn't require very much change in wartime when simply all that you do is to expand it and carry it on a little further. But even at that, we think it can be carried still further and the Under Secretary is making a very determined effort now to try to do something about it.

We think that there are a good many subcontractors around the country who are not doing any national-defense work at all that could be employed on some of our Government work. I think, myself, that that is going to come about in this way. The priorities on materials make it almost necessary for anybody who wants to do work these days to have national-defense work, so that in each area where there are shops those people will go to the people who have somewhat larger contracts and see what they have got and will find out what part of that they can take on themselves. Thereby, on what you might call a voluntary basis, this will be done, and there is no holding back on anybody's part now in giving out subcontracting, because they know they can always get plenty more work, you see, and in fact they are very glad to subcontract this work because in that way their volume is greater and they really come out better than if they tried to hold this all in their own plant. So there is every incentive to spread that work, and I think that it is going to be done in an ever-increasing amount, and entirely without any directive from the War Department, the Navy Department, or O. P. M., or anybody else. It is just going

to be a question of the business people of the country seeing that in order to carry on their business they ought to have a certain amount of national-defense work, and they are going out and get it.

Acting Chairman MEAD. However, Admiral, I think that it will have to be by direction as well as by the voluntary method, because there are literally thousands and thousands of small plants that are either closed or will be closed in the next few months, plants in rural sections, plants that provide all the employment there is in a community or an area, plants that just cannot get defense orders unless some bonus or some force is used to spread this defense program.

Admiral ROBINSON. Well, I agree to that, Senator, and that is being done and will be done. But I think that that is going to be a small part of the spreading of this work. I think the business people are going to spread it themselves about 10 times as much as we will be able to do with all of our efforts put together. Of course, the mere fact that we issue an incentive about it helps the businessman to get this spreading, because he is armed then with a club, when he goes into a plant to try to get contracting, to get it. But the job is so stupendous; just what you said is an indication of it. There are so many of those plants involved that it is a physical impossibility for any Government agency to know all of them and to know what the capabilities of them are and to work them into any particular or specific job. Even with the best intentions in the world, it just can't be done. We can issue the incentive and we can tell our supervisors—I mean our inspectors—in the various districts to inspect all these plants and to help them out in getting work, and all that sort of thing, and that will help, but the biggest part of it is going to be done by the business people themselves.

Acting Chairman MEAD. What effort is being made by the Navy to spread the work out geographically all over the country? Have you a directive that prevents the concentrating of bidding in one section or the restriction of negotiating contracts within an area? What is the plan?

Admiral ROBINSON. Well, the plan has been on shipbuilding, of course, on big ships, that we didn't have an awful lot of choice; the plants were already there, and we dealt with the plants as they existed. In the few instances where we put up new plants, of course we did just as you say; we went to an area that wasn't already building ships, to build them. We didn't have very many instances of that kind, of course; the Maritime Commission has a great many. They followed the same procedure. They went to new localities. There has been a very strong effort on the part of O. P. M. and the Navy Department as well, to develop new agencies wherever they could for any of this work, and there has been an order actually issued by the O. P. M. which forbids certain areas to be utilized any more for any expansions at all, and all of the methods that could be used for developing new areas for work have been used. In the case of small boats, for example, my instructions from the O. P. M. in that case were to place as much of this work as I could on the Great Lakes. Well, when we got down to cases we found that that wasn't entirely possible, that there were a lot of small boat plants in other sections of the country which were in just as bad shape as the Great Lakes, and we finally had to resort to a sort of competitive bidding. Of course, we didn't put any of that in

shipyards that already had this big work, or anything of that kind, but you have some restrictions about this, you can't always just pick out exactly what you would like to do and put the work there. There are a whole lot of restrictions about it. In some cases the costs are very much greater than other places. In other cases, the times of delivery were too great, and things of that kind entered into it. But, generally speaking, I would say that the Navy Department has certainly spread its defense program literally all over the United States, and just about as much as it has been physically possible to do it.

Acting Chairman MEAD. You spoke about competitive bidding, Admiral, and I am wondering what category of ships is to be included in the competitive bidding contracts. Does that apply to small ships?

Admiral ROBINSON. Small boats only.

Acting Chairman MEAD. What about destroyers, now that they are standardized?

Admiral ROBINSON. You couldn't have competitive bidding on destroyers, sir, because when people are going to be given more work than they really want, obviously there isn't any competition, and in those particular cases, also, we definitely wanted to put certain ships in certain yards. If we had attempted to place this big program by competition, we would have ended up with a hodgepodge of ships in all the yards, so that we wouldn't have gotten the ships out nearly as fast as we are going to get them out, and, furthermore, it would have cost a great deal more, because, after all, when people have nothing but the fact that they know they are going to get the job ahead of them, they aren't going to put in as low a price as where they have to compete with somebody else. There would have been no competition at all on the big ships, because every yard was made to take more ships than it really wanted to take. We mixed up battleships and destroyers and everything of the kind.

Acting Chairman MEAD. At the time of the awarding of the contract, you have nothing but the blueprint before you, and having blueprint and specifications available, you fix the price?

Admiral ROBINSON. That is right.

Acting Chairman MEAD. What happens so far as protecting the Navy is concerned if any changes occur in taxes and materials and wages, and so on? Does that price remain, or are there any modifications?

Admiral ROBINSON. You say protecting the Government, sir?

Acting Chairman MEAD. Yes.

Admiral ROBINSON. As you know, those things go up all the time.

Acting Chairman MEAD. I had that in mind; that was the reason for the next question.

Admiral ROBINSON. The Government is automatically protected, but the shipbuilders are protected in those cases by what we call escalator clauses, which take care of increases in labor and materials.

Acting Chairman MEAD. That is what I was going to ask next. Are the shipbuilders protected in case of higher taxes, higher assessments, higher wages?

Admiral ROBINSON. No, sir; not higher taxes.

Acting Chairman MEAD. Higher material rates?

Admiral ROBINSON. The only thing they are protected against is higher wages and higher material costs. If the taxes go up they make less profit, that is all.

Acting Chairman MEAD. Of course, I want to explain that I believe one of the major problems that will be presented to this session of Congress will result from the national-defense program insofar as the awards of contracts are concerned, and very shortly we will have to bear down on the Army and Navy for the diffusion of these contracts, for the spread of them geographically into every section of the country, because there will be a demand upon us, coming from these communities and villages that have drifted from prosperity into poverty as a result of priorities and as a result of defense contracts. Members of Congress are already taking cognizance of the importance of that problem. I don't believe that the subcontracting program has anywhere at all approached its necessity. I believe that incentives and directives and perhaps a powerful governmental agency with authority, more so than the O. P. M.'s Contract Division now enjoys, will have to be set up.

Admiral ROBINSON. Well, you may be quite right, sir. Of course, we are talking now on the general subject, and the situation in regard to shipbuilding is quite different from what it is in regard to certain other aspects of national defense. We can, of course, only build ships in certain localities. We can't diffuse shipbuilding to the same extent that you can other things. Subcontracting has been resorted to to a great extent. I think that it is true that it will be resorted to more in the future. However, there is one limitation on that, and that is that of course you can't subcontract if as a result of doing that you are going to definitely delay the thing that you are producing. That is going to have to be one of the considerations that govern this thing; where we are sparing no expense and making every effort to expedite the production of national defense articles, any thought to put material into a subcontractor's plant which will simply slow it up indefinitely would have to be ruled out.

In other words, we face a little different situation now from what we did, for example, at the beginning of the last depression. Work was placed there geographically and otherwise for a specific purpose of producing certain results. But I take it at the moment we are concerned primarily with national defense, and the next is the other considerations.

Acting Chairman MEAD. Having in mind the use of the \$700,000,000 which was appropriated for the purpose of expansion, and realizing that the expenditure of all that money in a few large shipyards would be a mistake, and appreciating the fact that the expenditure of some of that money in small plants where they have plenty of room and where, as you said in the Bath case, they present a very efficient outlay that would be helpful, it seems to me that the Navy ought to concentrate on the advisability of utilizing every plant facility in the United States by improving and expanding, with the use of some of this money as long as it would spread employment, and it would produce one boat before the completion of that boat would take place in a plant that was already overloaded with too many contracts for boats.

Admiral ROBINSON. There can be no question of that, Senator, and that has already been done. We haven't placed any boat with any shipbuilding concern that we didn't think we would get quicker than we would if we placed it anywhere else, in not one single instance.

Acting Chairman MEAD. Admiral, word reaches me that there are some facilities that can build boats that are not being used.

Admiral ROBINSON. Ships or boats?

Acting Chairman MEAD. Small boats.

Admiral ROBINSON. But, you see, there is the difference. We aren't having any trouble placing our contracts for small boats, and we haven't placed any contracts for small boats with any big shipbuilding companies, either.

Acting Chairman MEAD. In placing contracts for small boats and in trying to erase this spotty prosperity and impoverishment from the Nation, it seems to me that they ought to be spread all over the United States just as the big ships are spread.

Admiral ROBINSON. They are, sir.

Acting Chairman MEAD. And if these small companies require money, it ought to be given to them out of this \$700,000,000 expansion program or through the R. F. C. But I think every effort ought to be made by the Navy and by the Maritime Commission to see that every facility that can be brought into this program in every section of the United States shares in these appropriations in connection with this program.

Admiral ROBINSON. That has been done, sir, but in the case of the small boats, we have more plants than are required to build the boats. That is the situation.

Acting Chairman MEAD. Is it true that some of these plants have more boats than they can turn out immediately? Couldn't the program be diffused a little more so that more of them would come into it?

Admiral ROBINSON. I don't think so, sir. If I did, I would have done it at the time, because the sole consideration at the time of placing those contracts was how soon we could get the boats.

Acting Chairman MEAD. I have a list of the industrial plants that are closing up in the various sections of the country, and I want to tell you, Admiral, it is going to present a very serious problem to the Congress, and they are going, I think, to take some drastic action that will be more severe than the action that has been taken already by the Army, and the Navy, and the Maritime Commission. They will have to do it, or else they will have to appropriate large sums of money for a new W. P. A.

Admiral ROBINSON. What you say may be perfectly true, sir. That is a matter of national policy, and that is for the Congress to decide, of course. That is not a Navy Department decision.

Acting Chairman MEAD. That problem, of course, would be diminished if we could get the Navy and the Army and the Maritime Commission to get right down to business and issue these directives.

Admiral ROBINSON. We have done that, Senator.

Acting Chairman MEAD. Prepare these bonuses and advertise these incentives.

Admiral ROBINSON. What do you mean by bonuses?

Acting Chairman MEAD. I understand there are bonuses paid out for the quick completion of contracts and the expeditious completion of ships, and so forth.

Admiral ROBINSON. Well, no, we don't. No, sir; we don't have any bonuses for that. The only bonus that we have in shipbuilding is in some of these fixed-fee contracts where we have a 1-percent bonus for

savings, but generally speaking, the subject of the liberal use of bonuses is something that so far Congress has not seen fit to give us. Now, it might be that it would be advisable to have it. I don't know. But we haven't got it at the present time.

Acting Chairman MEAD. Talking about the liberal use of bonuses, Admiral, here is one in looking over this list. This is where I got the idea of bonuses. It isn't necessary that we have bonuses to diffuse the work.

Admiral ROBINSON. I don't think so, either.

Acting Chairman MEAD. Directives or any other method is better.

Admiral ROBINSON. I think so, too.

FEES AND CONTRACTS OF SHIPBUILDING COMPANIES

Acting Chairman MEAD. Here is the Associated Shipbuilders, of Seattle, possible bonus, \$160,000; fee, \$960,000. Consolidated Steel Corporation, Orange, Tex., fee, \$4,922,000; possible bonus, \$820,000.¹

Admiral ROBINSON. You know what that bonus is for, Senator?

Acting Chairman MEAD. Yes; it is for speed.

Admiral ROBINSON. No, sir; it is for savings.

Acting Chairman MEAD. Economy.

Admiral ROBINSON. It is for saving money in building the ship, principally. But the truth of the matter is—

Acting Chairman MEAD. Admiral, take this Los Angeles Shipbuilding Co.

Admiral ROBINSON. Yes, sir?

Acting Chairman MEAD. Fee, \$4,677,000; bonus, \$799,500; new facilities financed by the Government, \$1,185,000.

Admiral ROBINSON. If they are paid that bonus, Senator, we will save more money than the bonus paid, a great deal more.

Acting Chairman MEAD. Their average net profit, 1936 to 1940, is \$93,000. You talk about the Government's saving—they are going to make as much out of that contract as they did in 50 years of their prior experience if they have been in business that long.

Admiral ROBINSON. Very probably; yes, sir.

Acting Chairman MEAD. And one on this list will make as much as it did for 75 years. That is pretty good, isn't it?

Admiral ROBINSON. That is fine.

Acting Chairman MEAD. If we could only get some of that prosperity to the little fellow and see that it is well distributed all over the United States—

Admiral ROBINSON. Well, of course, the vast majority of the money that we are talking about there isn't going to be spent at the Los Angeles Shipbuilding Co. It is going to be spent all over the United States.

Acting Chairman MEAD. Oh, yes.

Admiral ROBINSON. The turbines, for example, to put in those ships will be built up in New York some place.

Acting Chairman MEAD. But the profit they will make will go to them, and that is profit equal to 50 years of their average profit.

Admiral ROBINSON. That is perfectly true, but the percentage of profit is quite small. It is 6 percent. I mean, those profits, anyhow, are fixed by law.

¹ Referring to Exhibit No. 85, see appendix, p. 1495.

Mr. FULTON. Admiral Robinson, I note that when you take the net worth as reported by the companies themselves at the end of 1939 that have these cost-plus-fixed-fee contracts, their net worth was less than the values of the new facilities that the Government built for them.

Admiral ROBINSON. That may very likely be the case.

Mr. FULTON. And also that the new facilities—that is, the value of the new facilities was considerably less than the amount of the fee that was to be paid.

Admiral ROBINSON. The amount of the new facilities was less?

Mr. FULTON. Yes.

Admiral ROBINSON. Very likely; yes.

Mr. FULTON. So that the net worth plus the new facilities isn't much more than the amount of the fee.

Admiral ROBINSON. It might very well be the case. Those fees, Mr. Fulton, in every instance are a percentage of the work done. I mean a percentage of the estimated cost of the work.

Mr. FULTON. In determining those fees, did the Navy ask them how much their average profits had been over prior years?

Admiral ROBINSON. Oh, no; it did not, sir. Congress specified that if we had to have a negotiated contract, it should be on a basis of a fixed fee which should not exceed 7 percent of the estimated cost. Now, as a matter of fact, in our own instances for shipbuilding, practically everywhere we have had negotiated fee, we have fixed it at 6 percent of the estimated cost, but, in order to have an incentive to keep the cost of these ships down, we put in that 1-percent bonus to cover savings in the cost of the ship, because we were trying to hold down the total cost of the ships as much as we could.

Mr. FULTON. As I understand it, Admiral, the Congress only provided a maximum fee. It didn't provide that you should necessarily approach that maximum.

Admiral ROBINSON. No, sir; that is perfectly true, Mr. Fulton, but it was generally accepted that the fee would be somewhere around that amount.

Mr. FULTON. For example, did any company suggest that it expected to have 80 years' average profits in order to induce it to enter into one of these contracts?

Admiral ROBINSON. As a matter of fact, Mr. Fulton, many of these companies hadn't had any profits at all. Some of them had been running deficits. I don't know what we would have done in a case like that if we had tried to use the past performance of the company.

Mr. FULTON. I imagine that they could wipe out the deficit, and it might have been a big help to them.

Admiral ROBINSON. It would.

Mr. FULTON. But did the Navy ask these people how much they were willing to do it for as distinct from telling them?

Admiral ROBINSON. Absolutely, we did. As a matter of fact, these concerns were not too enthusiastic about taking this at 6 percent. They all strove manfully to get 7 percent, but we couldn't give them that because of many reasons, one of which was that we wanted to have some incentive in this thing for keeping the price of the ship down, and the best way was to give the contractor a chance to earn some more money. By giving him a 1-percent bonus chance there, we could do that.

Mr. FULTON. I can't quite understand why a man who hasn't been able to make over \$22,000 a year would refuse to take a contract that would net him a million dollars bonus, and why it was necessary to give him one that would give him \$1,680,000.

Admiral ROBINSON. Well, you will find, Mr. Fulton, if you negotiate with these people who have shipbuilding plants, that they feel that they are taking a lot of risk. I don't feel that they are, and you don't feel that they are.

Mr. FULTON. What risk are they taking on a cost-plus contract?

Admiral ROBINSON. That is the point. What risk are they taking? But you will find that they feel they are. In the first place, you see, there is always a great deal of question about what is the cost on a ship. Our cost inspectors never allow all the costs that these people claim they have, you see.

Mr. FULTON. I know that.

Admiral ROBINSON. And there are many things that enter into this thing, and the shipbuilder will tell you that by the time he gets through his profits have been whittled down from a theoretical 6 percent to an actual 2 percent or 3 percent. We don't admit that, but if that is in the mind of the man that you are dealing with, it is just as potent as if it were a fact, you see. The fees that have been fixed there, these 6-percent fees, there is no question but that the hearings, I think, and discussion before the congressional committee in connection with this will bear me out when I say that everybody was expecting to pay a 7-percent fee for shipbuilding.

Mr. FULTON. The 7-percent fee expressed in what we ordinarily consider percentage of earning turns out to be an 8,000-percent fee in this one case.

Admiral ROBINSON. The 7-percent fee is on the basis of the work done. It hasn't anything to do with the question of the amount of capital they had or the amount of earnings they had over previous years, or anything else. It is very clear on that. The 7-percent fee is specifically on the amount of the contract, the cost of the ship.

Mr. FULTON. Just what does the company furnish for this 50 years' profit?

Admiral ROBINSON. Sir?

Mr. FULTON. Just what does it furnish for that fee?

Admiral ROBINSON. I don't quite get that.

Mr. FULTON. Just what do they furnish? They furnish the services of how many men, for example?

Admiral ROBINSON. For the fee?

Mr. FULTON. Out of the fee, that aren't being paid by the Government on a reimbursable basis.

Admiral ROBINSON. As a matter of fact, they furnish the services of everybody working at the shipbuilding plant.

Mr. FULTON. Most of those are compensated by the Government.

Admiral ROBINSON. All of them are.

Mr. FULTON. Well, then, are there any people that aren't being paid?

Admiral ROBINSON. No, sir.

Mr. FULTON. What do they furnish then?

Admiral ROBINSON. What do they furnish? They furnish their brains and their hands and whatever capital is necessary for carrying

on the work, the working capital amounting to some millions of dollars, and whatever they have in the way of physical assets and in the way of invested capital in the plant, and, most important of all, an organization which is accustomed to building ships. That is the most important thing they furnish.

Mr. FULTON. Now, you said brains and hands, that those are the things that they are being paid for.

Admiral ROBINSON. They are paid for everything that is there, Mr. Fulton.

Mr. FULTON. I mean that they are being paid for in addition to the fee. So the fee isn't paying for that.

Admiral ROBINSON. I would say the fee is for the purpose of using that plant. The facts are that if we didn't pay the fee we wouldn't use the plant. We wanted the plant, and we paid the fee for the privilege of using it. That is what it comes down to.

Mr. FULTON. And, as I take it, then, the fees were set by the Navy and not by the contractors. That is the Navy's.

Admiral ROBINSON. Oh, no; it was jointly. If we had allowed the contractors to set them, they would all have been 7 percent, but the 6 percent was our own idea, and we managed to get by with it.

Mr. FULTON. And some of these people condescended to take 50 or 60 years' profits as something less than they would otherwise have needed. Is that it?

Admiral ROBINSON. It is perfectly obvious, I think, Mr. Fulton, that in a plant which hasn't been doing much business for a period of years, if you suddenly decide to use it in time of national defense, it is pretty obvious that their total earnings—I don't mean percentage or anything of that kind—are going to be many times what they have been before.

Mr. FULTON. Expressed in terms of their net worth, I think you will find that these fees plus bonuses—now, here is one where the fee plus bonus is $5\frac{1}{2}$ times the net worth on their earnings.

Admiral ROBINSON. You see, Mr. Fulton, if you look back over a period of years, you will find that the Congress, in fixing limitations on profits or anything of that kind, has always dealt with the volume of work and not on past performance or future performance or invested capital or anything else. They have dealt with the volume of work in every case, even in the old days of the Vinson-Trammell Act, long before we had this emergency. All of those things were fixed on a basis of the amount of work. First it was 10 percent; then later it was lowered to 8 percent; and then when they got to these fixed-fee contracts, they lowered it to 7 percent. But there was never any question at all or any thought in any discussion that I participated in before any of the House committees which would have indicated that we were to take into consideration the previous earnings of that company.

Now, the tax bill does. There is a tax bill passed which very definitely takes into consideration previous earnings, but we have nothing to do with the administration of that tax bill. That is under the Treasury Department.

Mr. FULTON. But in determining how much you are to get these people to work for, you never asked them what they had been in the habit of getting?

Admiral ROBINSON. We didn't ask them what they had been in the habit of getting. What we were interested in was how much we could get them to take this work for.

Mr. FULTON. In doing that, you didn't ask them what they had been getting on any other work that they had been doing?

Admiral ROBINSON. As a matter of fact, we knew. We didn't have to ask them because we knew. We investigated the financial set-up of all these companies before we did any business with them at all. In the case of the concern that you picked out there, the Los Angeles Shipbuilding Co., as you know, that was in the hands of litigation. In fact, the Navy Department itself got that matter settled. I am sure it would still have been in litigation if we hadn't put pressure on everybody concerned to get it out so that we could use it. We needed the plant. We had to have it, as a matter of fact.

Mr. FULTON. In a case like that, where you are going to pay 5½ times what the net worth of the plant is, isn't it cheaper to buy the plant?

Admiral ROBINSON. Oh, well, you are now getting back to this question of national policy again.

Mr. FULTON. I mean did you consider it?

Admiral ROBINSON. It would probably be better if we owned all these shipbuilding plants, Mr. Fulton. I don't know. Perhaps it would.

Mr. FULTON. You did buy it. It is a question whether you got title to it. Isn't that it?

Admiral ROBINSON. I don't think we bought it.

Mr. FULTON. You paid for it.

Admiral ROBINSON. No; I don't think we paid for it. Everything that we paid for we still own. We own everything that we have paid for in that plant.

Mr. FULTON. They are to get five and a half million, and their worth was \$1,080,000, as they figured it. If you paid them five and a half million, haven't you paid them the worth of their plant?

Admiral ROBINSON. You mean as a fee?

Mr. FULTON. Yes.

Admiral ROBINSON. Oh, well, that is something else. That is supposedly earned by the uses of their plant. That is what we are paying them for. But I thought you were talking about the facilities that we had put in there. The facilities that we put in there, of course, we own—lock, stock, and barrel. They are ours.

Mr. FULTON. Do you own the land they are on?

Admiral ROBINSON. No; but they don't own the facilities, either, and at the end of that time we can take over the land if we want to.

Mr. FULTON. You have an option?

Admiral ROBINSON. We don't have to have an option. We can take over the land that our buildings are on any time at any place that we want to simply by a condemnation proceeding. What is more, we have done it in many instances. So the Government's interest is thoroughly protected. I want to make that point clear.

Mr. FULTON. Suppose you took over that, that is a part of the plant. It isn't a whole plant.

Admiral ROBINSON. We can take over the whole plant if we want to, and what is more, we have that club over all these people where

we have put in facilities. I say that the Government's interests are thoroughly and 100-percent protected in all places, because if we can't make an arrangement which is mutually satisfactory in regard to the price and the worth of those facilities at the end of this emergency, if we want to do it, we can take over the whole plant.

MR. FULTON. And you could have done it if they weren't willing to take a fair profit?

Admiral ROBINSON. Certainly.

MR. FULTON. And you could have done it at the time you entered into this contract if they weren't willing to take a fair profit?

Admiral ROBINSON. Certainly. Well, it all depends on what you call a fair profit. We thought this was a fair profit.

MR. FULTON. Fifty years' annual profits?

Admiral ROBINSON. Now, I don't think that has anything to do with it. You might have had the finest shipbuilding plant in the world and not have had any profits. In that case we wouldn't have paid them any profits at all, because they hadn't been earning any. But on the other case, Mr. Fulton, here is a man that might have been earning 15 or 20 percent, but we pay him 6 percent just the same.

MR. FULTON. Is there any 1 of these 13 companies that earned anywhere near, even within any remote fraction, the amount of this fee plus cost, because if there is, I haven't been able to find it.

Admiral ROBINSON. Which 13 companies are you referring to, sir?

MR. FULTON. The companies that had fixed-fee contracts.

Admiral ROBINSON. The fixed-fee companies are Todd, Seattle-Tacoma; Consolidated plant at Orange, Tex.; the Los Angeles Shipbuilding Co.; and the Pascagoula plant. Oh, I don't know—there are probably more than 13.

MR. FULTON. Is there any one of those, Admiral, that earned anywhere near the amount of this?

Admiral ROBINSON. They weren't building our type of ships at all, Mr. Fulton. They hadn't had contracts with us. These were people who had been doing—some of them—limited shipbuilding business, some of them repair business, and some of them very little business of any kind. They had skeleton organizations there which could be quickly built up. They had the key people, you see. That is really why we took the business to these plants, because they had an organization that knew shipbuilding. That was the reason we used them. That was the occasion of their getting any business at all.

(Senator Hatch assumed the chair.)

MR. FULTON. As far as I can ascertain from any of these companies, there wasn't one of them that earned anywhere near the amount of these fees.

Admiral ROBINSON. I think that is probably true. I doubt if there is any firm in the United States that has been earning as much money in dollars and cents—I am not talking about percentages—as it had been before, because the volume of business has increased so. I mean, we are doing billions of dollars' worth of work now as compared with millions gone by, and it is pretty obvious that even if you set a very low percentage of profit there, the total number of dollars profit is going to be very much larger than it has been in years gone by.

But the whole precedent and everything that Congress has done in connection with profits that we have had anything to do with has

been based on the volume of work done and not on the physical valuation of the property.

Mr. FULTON. Well, in fact, in a cost-plus fee, you tell a man to go out and hire as many workers as he needs and buy as much material as he needs in order to do a job. That increases the volume of the work. And then you pay him a percentage on that increased volume of work, despite the fact that he hasn't contributed any larger amount of his own capital enterprise to that than he would on a very much smaller volume.

Admiral ROBINSON. That is very true, Mr. Fulton, but that is only a part of the story. Of course, what you pay for mainly in this country is brains and the knowledge of shipbuilding. We wouldn't have utilized these plants at all if they hadn't had both. That is what we were paying the fee for. We were paying this man a fee to run the job and for the result he was getting. We wouldn't have taken these plants over at all. There are many people that would have been delighted to have these fee contracts, but if we had given them to them, they couldn't have carried them out. That is the whole point about it.

Mr. FULTON. And you found that these people in time of war were unwilling to take an incentive less than one of this magnitude, even though you asked them. Is that it?

Admiral ROBINSON. Well, yes; we did ask them what was the lowest fee they would take, but all of these people felt that that was a very moderate fee for what they were handling. In other words, for handling that sum of business, they thought that that was a very low charge. Most of them thought it was too low.

Mr. FULTON. Did you have any discussions with them about what they had been in the habit of making and whether they were making enough?

Admiral ROBINSON. No, sir; we didn't have any discussions about what they had been making because that has never been our basis for making contracts, but, as I say, we knew what they had been making. Particularly in this Los Angeles case, we had all the records of that case before us. We knew their financial set-up and everything else about it before we made any contracts with them at all.

Mr. FULTON. I think the worst single instance would be at Wilamette Iron and Steel. That is the one that is between 75 and 80 years' profits. That is rather a large number of years' profit, isn't it?

Admiral ROBINSON. If a man happened to be in a bad locality or something of that kind, Mr. Fulton, he might have been running a deficit for the last 25 years, just keeping his organization together, and if, in that case, we paid him on a basis of his earnings, he would have to do business for us for nothing. In fact, he would pay us for the privilege of doing it, and we couldn't do that. I mean the whole intent of Congress, as expressed in legislation over many years, has been that we pay for work on the basis of the volume of the work. We have never questioned that. I have never heard it questioned since I have been around here, and it is a commonly accepted basis for all of our contractual relations.

Mr. FULTON. You are paying almost up to the maximum allowed by the statute, I take it.

Admiral ROBINSON. That is quite true. That is quite true.

Mr. FULTON. And about double the amount that the Army was allowing on its fixed-fee contracts for camp construction, which has been the subject of—

Admiral ROBINSON. That is very different, and you will find that our contracts for camp construction—that is, comparable work—are also on a comparable basis on fees.

Mr. FULTON. How much fee did you allow on that contract?

Admiral ROBINSON. We didn't allow any fee at all. It all depends on what you are talking about. The shipbuilders had a contract for these facilities. Is that what you are talking about? And they contracted for it without any profit at all. Of course, the contractor who put up those facilities made a profit, and his profit was somewhere between 2 and 4 percent.

Mr. FULTON. What I meant, though, was that on the question of the operation of the shipyard, you are paying 7 percent, whereas, of course, on the operation of the camp, which would be built in a much less time than these ships could, they were paying 3 and 4 percent. It wouldn't be wholly comparable because it is a shorter time.

Admiral ROBINSON. They wouldn't be at all comparable, and that fact has been recognized right along in the two cases. Our Bureau of Yards and Docks has been contracting for public works on a fee basis for a good many years, and they have uniformly been able to get very much less percentage than we have been able to get on shipbuilding. The undertaking is so large and the amount of money people have out is so great that there are much greater risks, and, of course, the contracting business goes on at a much more rapid rate, and they make this 2 or 4 percent several times in a year in actual dollars, which you were interested in a minute ago, which might be very much larger than the other fellow made on a higher percentage. Those are things we have some control over, but not 100 percent, of course. When Congress passes a law here fixing 7 percent as the maximum legal limit for fixed-fee contracts, it is pretty difficult for us to get it down a great deal lower than that. It would be, of course, if we had all kinds of shipbuilding—I mean if we had all kinds of shipbuilding plants. In other words, if there was great competition for this work, it would be very different, but there isn't.

Mr. FULTON. In the case of the ship conversion, Admiral, would you tell the committee how you figured out the method of determining the prices to be paid for ship conversion?

Admiral ROBINSON. For the ship itself or the conversion?

Mr. FULTON. No; the conversion of the ships acquired.

Admiral ROBINSON. We have a form of contract for doing repair work or conversion work in shipyards. We call it a labor and material contract. It is a form of contract which is very simple in its workings, but it is also rather arbitrary. The final result in the fixing of the labor and material rates is such as to take care of overhead and profit and everything of the kind entering into the contract. We fixed those rates at every plant that we made a contract with, based on his previous performance, and most of the yards which have those contracts have had some work. There have been a few that haven't.

After the contracts were made, the volume of work in those yards rose to a very high degree due to many reasons. One was that we started in acquiring a great many more ships than were down to be

acquired at the time these contracts were made. In other words, the volume of conversion work was jumped up to several times what we were expecting when we made the original contracts. Also, there was a large influx of additional commercial work so that the repairing and conversion yards, which were normally idle a good part of the time, were suddenly filled up with work. In some instances they are actually working shifts in order to keep up with the work. The result of that was that the labor and material rates that had been fixed turned out to give these contractors inordinately high profits, sometimes as much as 40 percent, maybe more than that in some instances.

Mr. FULTON. That is 40 percent of the cost of repairing the ship?

Admiral ROBINSON. The cost of the work.

Mr. FULTON. It might be 400 percent of the profits that the company had been used to making.

Admiral ROBINSON. I wouldn't know about how much it would be in that case.

Mr. FULTON. I mean it would be very much more than that.

Admiral ROBINSON. It might be and it might not, I do not know, but in any case it was based on volume of work. We never considered anything else, of course. But as soon as that effect became apparent, as it did after these contracts had been operating for a while, the Navy Department took steps to correct that. We renegotiated the contracts on a lower basis, and in some instances they were made retroactive so that actually the total amount of work done was reduced—will have been reduced to about an average of 10 percent profit.

Mr. FULTON. That will be about 50 percent over the 7 percent maximum that you referred to for cost-plus, wouldn't it?

Admiral ROBINSON. Yes; but, of course—

Mr. FULTON (interposing). And even as so reduced and even as made retroactive.

Admiral ROBINSON. I would like to state, Mr. Fulton, in connection with repair work, that the people who handle repair work have always been expected to make considerably higher percentages than those who were engaged in construction work, and I may also state that the question of whereas the Government's interests were properly taken care of in this case, the private manufacturers were and still are paying those very high percentages, and the Government is getting a very much lesser rate in all of those plants. I would like to emphasize again, though, this question of previous earnings of companies. That may be a good basis for fixing profits, I do not know, but it is not one that the Navy Department has ever used, nor has it ever been suggested by Congress. I have no knowledge of it at all, because manufacturers go along from one year to the next. Sometimes they have earnings of minus 20 percent, and the next year may be plus 20 percent.

Mr. FULTON. That is why you might take, as we have here, an average for 5 years.

Admiral ROBINSON. What?

Mr. FULTON. That is why we took their average for 5 years.

Admiral ROBINSON. That is a new idea, Mr. Fulton.

Mr. FULTON. Only for the purpose of seeing whether there is any relation at all.

Admiral ROBINSON. There isn't any relation at all, not even remote, in dollars between previous earnings and the present situation, because the volume is tens, hundreds, thousands, or even millions of times as much as it was in times gone by. I suppose it is infinitely greater in the case of the fellow who didn't have any business, so that that is a method of comparison that I don't know anything about. We have never used it. It has never been used in the Navy Department to my knowledge. Congress has never suggested that we use it. The only place that I know of that it has ever come into play at all is in tax returns. It has been used there right along. It is in the present tax bill, but it has nothing to do with contracting at all so far as we are concerned.

Mr. FULTON. Going back to this conversion contract, I thought you said it was a question of agreeing on the amounts of labor and the amounts of material.

Admiral ROBINSON. Well, the material part is fixed. There is a 10 percent carrying charge for that, but the labor part is something that is subject to fluctuation.

Mr. FULTON. With respect to the conversion itself, weren't there also agreed rates for the hiring of machines?

Admiral ROBINSON. Oh, yes; everything. There are rates for everything that we use—labor, material, machinery, docks, everything in there, even such small things as paint brushes.

Mr. FULTON. Those rates were fixed, were they not, on the basis of the charges that had ordinarily been made per hour for repair work, which was sporadic and occasional?

Admiral ROBINSON. Generally speaking; yes.

Mr. FULTON. I noted particularly a notation that air hammers at those particular rates would be paid for in, I think, less than 3 days, and I can't understand how anyone could possibly enter into that kind of contract, thinking it was a good one.

Admiral ROBINSON. Mr. Fulton, that isn't correct, of course. As a matter of fact, air hammers do wear out pretty fast.

Mr. FULTON. Do they wear out in 3 days?

Admiral ROBINSON. No; and these rates didn't pay for them in 3 days, either; but the question of these conversion contracts, I don't think there is anything there that is at all out of line. The Navy Department's action, I think, is perfectly justified in every respect. We made these contracts. They were a new type of contract. We had never used them before. We had never had any experience with that sort of work. We took the existing conditions as we found them, and as soon as we found that they were too high—we didn't lose any time about doing it, either. We did it so promptly that the Government's interests were thoroughly protected, and we came out all right. We got our work done, and we got it done promptly and done well. On the whole history of that, of course, it forms a very small part of our work over the total amount of contracting. It is something less than a hundred million dollars for all of the conversion work we have done, which is a very small amount of our total contracting. But it wasn't lost sight of at all. It was handled very promptly.

Mr. FULTON. Hasn't it cost about as much to convert the boats as it would have to buy them?

Admiral ROBINSON. In many instances, very much more.

Mr. FULTON. Even though it is only a hundred million dollars, it is still a sizable sum of money.

Admiral ROBINSON. It is a lot of money, but there isn't any question but that our interests have been thoroughly conserved in the case. That is my point.

Mr. FULTON. What I mean, Admiral, is why couldn't they come a little closer in the rental of those air hammers to actualities?

Admiral ROBINSON. As a matter of fact, you realize, no doubt, that where you are setting up rates on hundreds of tools that go into a plant, the actual rate on some one tool in there might be considerably off, of course, because what we were striving for wasn't any one particular tool. What we were striving for was an average, and that is what we are doing now in this new supplement A or B. We simply arbitrarily reduced those rates to a percentage which will make the profits fall within the limit of the 10 percent which we arbitrarily selected.

Mr. FULTON. Does that mean, then, that the average tool in there was put in at a rate that was, as you now determined, excessive?

Admiral ROBINSON. No; it simply meant that it would be excessive if you had a certain amount of work. If the work that we put in there had been no greater than we originally contemplated, those rates would have been all right. Those percentages would have been low, and everything would have been just about as we had originally contemplated. But again, when you are dealing with volume of work, you want to remember what the effect of that is on the overhead of the plant, you see. It just gradually disappears, and that is what happened here. That is why the total costs of converting the ship were so much less than had been contemplated. In other words, what happened was this, really, Mr. Fulton. We got the ships converted for much less than we had expected we were going to get it done for, and that made the profits seem higher, don't you see? If those ships had been converted at 75 percent more than they actually cost, everybody would have thought we did a very fine job in fixing those rates in the first place.

Mr. FULTON. Take the case of that air hammer. If you had used it 75 percent longer, your rent would have been even worse.

Admiral ROBINSON. I am not talking about 75 percent longer. Those are only a part. We are dealing here with the cost of conversion, Mr. Fulton.

Mr. FULTON. That is right.

Admiral ROBINSON. And one of the elements of cost of that conversion is the yard overhead, you see. Now, if the ship had cost a great deal more to convert or if there had been only a smaller number of ships there so that this ship had to bear a much larger percent of the overhead, the cost of doing the work—actual book cost as shown by the shipbuilder—would have been far greater than it was. In that case these profits would have been lined up all right, don't you see? But when you throw a great, big volume of work in there and the overhead comes down by being distributed over a whole lot of ships, then the cost to the Government in the case of the conversion is very much less than it would have been before, but the percentage of profit goes up.

Mr. FULTON. Now in that case, you feel that where you do find that you have so increased the volume, you should ask for a readjustment of the contract?

Admiral ROBINSON. We have done so.

Mr. FULTON. Now, have you done that in the case of these companies where you had these cost-plus-fixed-fee contracts where you have increased their volume out of all proportion to anything they have ever had?

Admiral ROBINSON. Mr. Fulton, those were fixed before we started. You are comparing cases that are different. In the case of the conversion contracts, the increased volume happened after the contract was made. In the case of these other ships, the increase in volume was coincident with the contract. It wasn't the same thing, don't you see?

Mr. FULTON. Now where the increase in volume is not coincident with the contract, then you have cut it down in all instances?

Admiral ROBINSON. Would you mind asking that again?

Mr. FULTON. Where the increase in volume was not coincident with the contract but occurred after the original contract had been made, have you decreased the prices?

Admiral ROBINSON. Are you talking now about ship construction?

Mr. FULTON. General activities and ship construction.

Admiral ROBINSON. Well, the questions of ship construction and ship conversion have been handled entirely differently. The two contracts are just as different as daylight and darkness. They don't bear any resemblance to each other at all. The fixing of prices and fees—the fixing of fees is something that is fixed; it isn't subject to variation. What we are talking about here now is subject to variation. These people might very well have lost money on these contracts. They didn't have to make profits. But in the case of the fixed-fee business, it is fixed, and they make that fee, supposedly, in all cases. Where we fix the fee there, we fix it on a basis of the estimated cost of the ship, and it was fixed at 6 percent in all cases, and that was regardless of volume.

Mr. FULTON. And when you increased the volume you didn't decrease the fee?

Admiral ROBINSON. No; no; we didn't, because the fee was a percentage. In this other case we had fixed these fees on a basis of what we felt to be a reasonable return of profit. When we increased the volume of business there, that changed the profit. The fee in this other case doesn't change. They make the same profit. It is absolutely fixed before they start.

Mr. FULTON. When you increase the volume it necessarily increases the profit in dollars.

Admiral ROBINSON. Yes; but not the percentage. The other increases it in the question of percentage, Mr. Fulton. The only thing we can possibly follow is percentage. I don't know how I would set, for example, if I would say to the Todd Shipbuilding Co., "Now, the maximum profit you are going to earn in any one year is \$100,000, and that is regardless of whether you build 1 destroyer or 40 destroyers, or anything else." I couldn't do that. In the case of these other people, I don't know. I fix their profit on the basis of the volume of work. It is a percentage of that volume. I never heard of any system of fixing profits on a total amount of profit that a man earned regardless of the volume of his business. I mean, that is a new idea.

Mr. FULTON. That isn't what I suggested.

Admiral ROBINSON. It is a new idea. It may be a good way to do it.

Mr. FULTON. I think you misunderstood. I said if you found that

the Cramp Shipyard was going to make a hundred thousand dollars on a volume of a million dollars, and then you increased their volume to one hundred million, I would think that you would consider it just as you had in the conversion ship case, whether you should increase their price to ten million, their profit to ten million or only to two or three million.

Admiral ROBINSON. We did do the same thing that we did in the conversion case, which was to try to maintain a certain percentage of profit. That is what we are trying to do in both cases. In one case it is not a fixed amount. It is just a maximum that we don't want them to exceed. They may earn a great deal less than that, of course. These ship repair people may sustain a loss, even.

Mr. FULTON. Now, in the case of the big destroyer contracts with Bethlehem and a subsidiary of United States Steel, when you let a second group of destroyers, thereby increasing their volume, decreasing their overhead and increasing their per-ship profit, did you decrease your price per ship?

Admiral ROBINSON. We did not, because the volume in the first instance had already taken care of that. As I said in the first part of my testimony here, when you build a lot of ships, the second one, of course, is cheaper than the first, but you don't carry that very far. You shortly arrive at a point where the cost runs the same from there on, and that is what was taken into consideration when we awarded these 40 additional destroyers to the various shipbuilders who already had destroyer contracts.

Mr. FULTON. Did you, in awarding those, compute the amount that you expected the Bethlehem Steel and United States Steel to make and then negotiate with them to see whether they would take something less than that?

Admiral ROBINSON. I can assure you that we negotiated with them to see how little they would take, as we did with every shipbuilder who was involved in this program. We got the best bargain that we could. I assure you that we drove the very hardest bargain that we could possibly drive with every shipbuilder in every instance. We drove just as hard as we could, and when we got to a point where we saw we weren't going to get the work placed any other way, of course, we didn't drive any more. We stayed within either the actual, or you might say moral, limits which had been set by Congress. Of course, there is no limit theoretically at all on the profits of a fixed-price contract.

Mr. FULTON. But you tried to stay on what would amount, so far as you could compute it, to a profit of 7 percent of the volume?

Admiral ROBINSON. No; 8 percent on a fixed-price contract. What we took was the old Vinson-Trammell Act which provided a maximum of 8 percent on this shipbuilding business, and that is what we used on those fixed-price contracts.

Mr. FULTON. What is the total volume, say, that Bethlehem has?

Admiral ROBINSON. Total volume of shipbuilding?

Mr. FULTON. Yes.

Admiral ROBINSON. Well, it is roughly a billion dollars.

Mr. FULTON. That would mean that the profit you had in mind for them would be about 80 million, is that it?

Admiral ROBINSON. More than that, isn't it?

Mr. FULTON. Eight percent of a billion would be 80 million.

Admiral ROBINSON. Eighty million; yes.

Mr. FULTON. Was it necessary to pay them that much as an incentive to get them?

Admiral ROBINSON. I am sure it was; yes, sir.

Mr. FULTON. And in the case of the Federal Shipbuilding, the United States Steel's subsidiary, what did they get as a total shipbuilding?

Admiral ROBINSON. Roughly, 300 million.

Mr. FULTON. So that you were basing that on about 24 million?

Admiral ROBINSON. Yes, sir. You can take that to be the case in connection with all of these fixed-price shipbuilders.

Mr. FULTON. I note that that would be over and above and in addition to their fixed-fee contract, wouldn't it?

Admiral ROBINSON. They haven't any fixed-fee contracts. The only one of those that has a fixed-fee contract is the Federal, and they were experimental ships which we expected to change over to fixed price, and have done so.

Mr. FULTON. In the case of Federal, I note they have been making a million three hundred thirty-two thousand on the average, and they insisted on getting, as you say, 24 million.

Admiral ROBINSON. They insisted on an 8-percent profit, yes, sir; because that is what they had been entitled to under the law for many years. That is perfectly true, these are contractual percentages, you understand. Some of these contracts run for 4 or 5 years.

Mr. FULTON. In the case of Federal—

Admiral ROBINSON (interposing). But it is a percentage of money, that is the point about it.

Mr. FULTON. Have you anything you want to add, Admiral Robinson, to your testimony to clarify any points?

Admiral ROBINSON. Mr. Fulton, in order to clear up the question of geographical distribution of our contracts, we have some tables¹ that I would like to append to the hearings in order to show just exactly what we have done in that regard already.

Mr. FULTON. It should be done now.

Admiral ROBINSON. I would like to add this point, that most of our discussions have been about fee contracts, but that represents only a very small proportion, about 18 percent of our shipbuilding contracts, just for the record. It hasn't any particular bearing, that I know of, on what we have been discussing, but it might be of interest.

Mr. FULTON. The two largest contracts would be larger in dollar volume than all these put together.

Admiral ROBINSON. Quite true.

Mr. FULTON. In the case of Bethlehem and Todd Shipbuilding, I understood they had returned some profits. Was that on conversion work?

Admiral ROBINSON. It was; yes, sir. The settlement on this conversion work was done differently. In the case, for example, of the Bethelhem Co., their contracts were in such a state that it was difficult to make actual returns of money. Of course, one of these contracts

¹ Under date of August 8, 1941, Admiral Robinson submitted a table indicating the geographical distribution by States of private shipyards presently engaged in Navy work, which appears in the appendix on p. 1502.

is completed and when final settlement has been made, you can't make a return of money to the Government. You get into all kinds of trouble if you try to do it. What they are doing there is this: In the next contracts that they have, they are doing the work at no profit at all to balance this thing up so that we will come out with about a 10-percent average. In other cases the work was not advanced so far but that we could actually make the rates retroactive and straighten out the profit in the contract. We had to do a different scheme in every case in order to get it straightened out, but there will be very few of those contracts that will run over 10 percent.

Mr. FULTON. In those material and labor contracts did you have a recapture clause to recapture machinery which you were paying for by the hour, at a point where your payments equalled or exceeded the value of the machinery?

Admiral ROBINSON. Oh, no, sir; we didn't. That would have been impracticable for for many reasons. In the first place, that machinery was being used not only on our work, but on commercial work.

Mr. FULTON. Of course, you could have leased it back to them.

Admiral ROBINSON. We could have bought the plant, for that matter.

Mr. FULTON. I mean, you were buying the machinery when you rented it for more than the cost.

Admiral ROBINSON. We were buying the use of it.

Mr. FULTON. You were paying for the machinery without getting the title. It wouldn't have hurt anything to have the title.

Admiral ROBINSON. If you apply that, I suppose any man that buys enough lamps would own the General Electric Co.'s lamp plant. That may be what we should have done, and it may be the perfectly right thing to do. But that is a perfectly new idea to us. We have always contracted for the use of a tool, and after we have used it, we didn't consider that we had any further claim on that tool unless we specified it in the contract. That is the way we have done it, whether it is the right way or not.

Mr. FULTON. That is all the questions that I have.

Mr. O'DUNNE.¹ Mr. Fulton, the Navy Department has some schedules and progress reports and charts which may well illustrate Admiral Robinson's testimony, and we would like permission to insert those in the record. We will present them to you first for your inspection, if that is correct.²

Mr. FULTON. Senator Hatch directs that they be put in the record. I shall introduce the chart entitled "Navy Cost Plus Fixed Fee Contracts" for the record.

Acting Chairman HATCH. It may be admitted.

(The chart referred to was marked "Exhibit No. 85" and is included in the appendix on p. 1495.)

The committee will stand adjourned until next Tuesday morning at 10:30, at which time we will hear Under Secretary of War Patterson.

(Whereupon, at 1:30 p. m., the committee adjourned until 10:30 a. m., Tuesday, July 15, 1941.)

¹ Eugene O'Dunne, special assistant to the Under Secretary of the Navy.

² See supplemental data, appendix pp. 1496-1506, for additional data submitted by the Navy Department.

APPENDIX

EXHIBIT No. 66

STATEMENT OF COMMISSIONER JOHN J. DEMPSEY, OF THE UNITED STATES MARITIME COMMISSION, BEFORE THE UNITED STATES SENATE COMMITTEE TO INVESTIGATE THE NATIONAL DEFENSE PROGRAM, ON TUESDAY, JUNE 3, 1941

Mr. Chairman and gentlemen of the committee, at the outset, speaking on behalf of Admiral Land, our Chairman, and the other members of the Maritime Commission, I wish to state that we were happy indeed to learn of the formation of your committee. In particular, we welcome it, first, because it affords us an opportunity to acquaint Congress with our current activities and the progress the Commission has made since its establishment, as well as the progress which has been made in the administration and fulfillment of that phase of our national-defense effort with which we are charged; and, second, having familiarized you with our objectives, if in the future problems difficult of solution should confront us, we believe you can give us timely help with them. The Commission commends each of you upon the service you are rendering the national defense by your membership on this committee and, so that we too may do our part, I have been directed to assure you that we seek to cooperate fully with you in every way.

MERCHANT MARINE ACT, 1936

Primarily, the Maritime Commission was created to reestablish American shipping and to return it to the preeminent position it held in the days of the clipper ships. When the permanent Commission took office on April 16, 1937—just a little more than 4 years ago—only nine new cargo vessels of 2,000 gross tons and over had been constructed in the United States during the preceding 10-year period. The ocean-mail-contract aid system had failed although the Government for some years had been paying approximately \$30,000,000 annually for the carriage of mails which under normal ocean rates would have cost only \$3,000,000. The liberal treatment accorded ship operators had resulted in much waste and extravagance, and many of the contractors had diverted the Government grants to other than sound shipping operations. Moreover, at that time our merchant marine was composed largely of vessels built as a unit during the World War period and, as a unit, was rapidly becoming obsolete. While the United States ranked third in tonnage engaged in international trade, it ranked fourth as to speed and last among the principal maritime nations in regard to the age of its vessels. Vessels could be constructed much cheaper, largely due to lower labor costs, by foreign shipbuilders. Foreign-flag operators had a similar advantage over their American competitors. Without some system of Government aid, shipping was a losing enterprise and there was little incentive for engaging in it.

Recognizing the need for a merchant marine adequate to carry a substantial portion of our commerce and to serve efficiently as an auxiliary to the Army and Navy in time of war or national emergency, the Congress enacted the Merchant Marine Act, 1936. To overcome obstacles presented by lower foreign costs, the act provides for outright building and operating subsidies designed to place American building and operating costs on a parity with those of foreign nations.

With respect to operating costs, American operators were to be paid the difference in cost of operating under American registry as compared to the cost incurred under foreign-flag operation. Insofar as the construction of vessels was concerned, the Commission was directed to build ships and sell them to operators at the price the operators would have had to pay had the ships been constructed abroad.

OPERATING-DIFFERENTIAL SUBSIDY CONTRACTS

As a substitute for the ocean-mail contracts which were abrogated as a result of the Merchant Marine Act, 1936, the Commission has entered into long-term

operating-differential subsidy contracts with 12 operating companies serving over 30 essential foreign-trade routes. In normal times, these lines encircle the globe as emissaries of American commerce. Due to the war and the establishment of combat zones, four companies have been forced to abandon 14 services. The urgent need of tonnage, however, has permitted the vessels normally employed in these services to be used advantageously elsewhere.

LONG-RANGE CONSTRUCTION PROGRAM

As a condition to the granting of operating-differential subsidies, the various steamship lines agreed to replace certain of their vessels with new ones to be constructed by the Commission. Following an intensive survey of American shipping, which was incorporated in a report to Congress known as the Economic Survey of the American Merchant Marine, 1937, the Commission embarked upon a long-range construction program designed to bring about the orderly replacement of our aging fleet. The program—essentially a peacetime replacement plan as distinguished from the recently inaugurated emergency-building program—originally contemplated the construction of some 500 vessels to be built at the rate of 50 a year. This schedule, however, has been accelerated during the past 18 months.

As of May 24, the Commission had entered into contracts for the construction of 198 vessels of 1,548,398 gross tons, including passenger and cargo vessels and tank ships. Of this number, the keels of 143 have been laid, 111 have been launched and 85 have been delivered. These ships are being constructed in 15 yards, widely distributed along the east, Gulf, and west coasts, and are now going into service at the rate in excess of one a week. They have been designed by the Maritime Commission to meet the exacting requirements of the various trades in which they will compete, to afford the best and most complete protection for passengers and crews against fire and all marine perils, and are equipped with propelling machinery of the most modern and economical type. From the enviable performance records of the ships already in operation, we believe them to be the best and most efficient that have ever been built.

EMERGENCY SHIP CONSTRUCTION

The Emergency Ship Construction Division was created by the Commission on January 7, 1941, 4 days after the President's announcement that legislation was being prepared to authorize the building of 200 emergency, standardized design, cargo vessels, now known as the Liberty fleet. For the purpose of building the 200 vessels and the necessary shipyard facilities originally contemplated under the emergency ship-construction program, the Commission has been allotted in all a sum of \$350,000,000. It is specifically provided in the legislation by which the necessary funds were appropriated that the Commission may enter into contracts for the construction of these vessels on the basis of negotiations without regard to section 3709 of the Revised Statutes which requires competitive bidding in connection with Government contracts.

The initial problems concerning the program with which the Commission was faced were, first, what should be the design of the vessels, and second, where could they be built.

After considerable study, it was decided to follow the plans which the architectural firm of Gibbs & Cox of New York City had prepared for the 60 ships which are under construction for the account of the British Government in the yards of the Todd Shipbuilding Corporation at Richmond, Calif., and Portland, Maine. By adopting this design substantially, it was possible to effect a material saving in the main essential, time. It also permitted the Commission to take advantage of the work Gibbs & Cox had done in the matter of procurement by expanding the orders which already had been placed for many of the materials which will go into the British ships.

The problem of where to build the ships was more difficult of solution. All of the existing yards were filled to capacity either with naval contracts or with the long-range building of the Commission. Ultimately it was decided that either old yards not presently in use would be rehabilitated or new ones constructed. The principal factors requiring consideration were: The need of qualified shipyard management; availability of labor; and adequate transportation facilities to the sites. The most important of these was qualified management, which, insofar as could be determined, was already affiliated with the existing yards. To meet this situation it was decided that the management of the

going yards should be extended to operate the new ones. At the same time, it was necessary that the properties be located so as to offer the least interference with the labor supply of going concerns. In view of these factors, the Commission interested the following companies in the program:

1. The Bethlehem Steel Co. (shipbuilding division), which is providing the management for the Bethlehem-Fairfield Shipyard, Inc., at Baltimore, Md.
2. The Newport News Shipbuilding & Dry Dock Co., which is providing the management for the North Carolina Shipbuilding Co. at Wilmington, N. C.
3. The Alabama Dry Dock & Shipbuilding Co., which is merely an extension of its present facilities at Mobile, Ala.
4. The American Shipbuilding Corporation, which under the name of the Delta Shipbuilding Co. is providing the management for the Louisiana Shipyards, Inc., at New Orleans, La.; and
5. The Todd Shipbuilding Corporation, which is providing the management for the California Shipbuilding Corporation at Los Angeles, the Oregon Shipbuilding Corporation at Portland, Oreg., and the Houston Shipbuilding Corporation, at Houston, Tex.

Contracts have been negotiated with the aforementioned companies for the erection of shipyard facilities, including 51 ways, and for construction of the vessels. The facilities contracts, which it is estimated will require the expenditure of approximately \$38,600,000, provide that all facilities will be Government owned. The land upon which the facilities are constructed will be privately owned and the yards will be privately operated. All facilities are to be erected by the respective shipbuilders for the account of the Government, without profit to themselves, and with the further understanding that the shipbuilders will accept the ship construction contracts offered by the Commission.

The contracts for the construction of the vessels are on a cost-plus-a-fixed-fee basis with certain bonus and penalty provisions which have the effect of increasing or decreasing the fees. Under the terms of the contracts, the Commission agrees to pay the full cost of constructing the vessels plus a fee of \$110,000 per vessel. In the event that any vessel is delayed beyond the scheduled delivery date, the fee will be reduced by a sum of \$400 for each day of such delay, and in the event that any vessel is delivered prior to such date, the fee will be increased by \$400 for each day of early delivery. The contracts contain an estimate of the man hours of direct and indirect labor required for the construction of the vessels. In the event that a contractor uses more than the estimated number of man hours, his fee will be reduced in the amount of $33\frac{1}{3}$ cents for each of the excess man hours. If he uses less than the estimated number of man hours, his fee will be increased by an amount equal to 50 cents for each man hour saved. In no event, however, shall the bonus or penalty have the effect of increasing a contractor's fee to an amount in excess of \$140,000 or decreasing such fee to an amount less than \$60,000.

The construction contracts were signed effective as of March 18, 1941, and pursuant to their terms, completion of the vessels is required by March 17, 1943.

Following the enactment of the lease-lend bill, the President directed the Commission to make provision immediately for the construction of 212 additional vessels during the next 2 years, of which 112 are to be of the standardized Liberty-fleet design, and 100 of the various types being built under the Commission's long-range replacement program. Of the last-mentioned group, 72 will be tank ships and 28 will be C-type cargo vessels. Thus, the over-all requirements of the emergency ship construction program call for the delivery of 412 vessels within the ensuing 2-year period.

No new yards were established as a result of the enlargement of the program. For the construction of the 112 additional Liberty-fleet vessels, 18 ways at an estimated cost of \$12,404,150 were added to the emergency yards. With respect to the 100 vessels of the long-range types, the facilities of existing yards were enlarged by the construction of 34 additional ways which are being financed by the Government at an estimated cost of \$30,383,904.

To carry out this additional construction, \$550,000,000 of the funds appropriated by the Lease Lend Act have been allocated to the Commission, making a total of \$900,000,000 to be expended within the next 2 years for emergency shipbuilding purposes.

The Commission realizes that to accomplish this vast construction program it will be necessary to employ many additional shipyard workers. Most of the yards

have instituted training programs of their own, but the Commission is fearful that the demand for trained labor will be greater than can be supplied by an individual shipyard action. Estimates prepared for us, which we believe are conservative, indicate that all shipbuilding, including both Navy and maritime, will require by September 1942, 374,000 more shipbuilding workers than are now engaged in the industry. Of this number, 278,000 must be skilled, semiskilled, and supervisory. It is unlikely that enough mechanics can be supplied on time unless the training problem is attacked directly and expeditiously by everyone concerned. In this matter the Commission is seeking the assistance of all the various Federal agencies now coordinated by the Division of Labor Supply and Training.

I am happy to be able to report to the committee that the construction of the Liberty fleet is well ahead of schedule. Instances of the progress which is being made may be cited as follows: At the Bethlehem-Fairfield Shipyards, keel layings originally scheduled for May 12 and June 3 occurred on April 30 and May 16; the Oregon Shipbuilding Corporation advanced the keel-laying of its first emergency vessel from June 2 to May 19, the latter date, incidentally, marking the one-hundredth anniversary of the laying of the keel of the first ship ever constructed in Oregon; two keel layings in the yards of the California Shipbuilding Co., originally set for June 2 and July 12 were accomplished on May 23 and 24, respectively.

As a further example of the pace at which the over-all emergency construction program is progressing, contracts for all of the engines which will provide the motive power for the 312 ships of the Liberty fleet have been awarded. Manufacturing plants in many parts of the United States will construct the engines and the contracts provide for their delivery at stated intervals throughout an 18-month period.

Wide geographic distribution of these and other contracts has been made in accordance with the policy of the Commission, through centralized purchasing, to tap as many fields of available skilled labor and production facilities as possible without interference with other phases of the national-defense program. This will expedite the arrival of the necessary materials and machinery parts from comparatively near-by fabricating plants as they are needed in the shipyards.

EMERGENCY SHIPPING

The Commission's Division of Emergency Shipping was established on February 28, 1941. It is charged with the function of coordinating the facilities for ocean transportation and working out programs and methods for the maximum utilization of shipping facilities, as directed by the President in a letter addressed to Admiral Land on February 10, 1941. The Division has supervision of all emergency shipping problems and maintains liaison with the War, Navy, and State Departments, the Office of Production Management, the Rubber and Metals Reserves Corporations of the Reconstruction Finance Corporation, and other governmental departments and agencies with respect to emergency activities of ship transportation. It also has general supervision of the negotiation of sales, charters, transfers, reallocations, reassignments, and acquisitions of vessel tonnage in connection with emergency transportation.

As a first step in carrying out the objectives outlined by the President, the Commission, on March 11, 1941, sent a letter to all citizens of the United States who own or control vessels of United States or foreign registry, requesting them to submit to the Commission in advance full information concerning any proposed sale or charter of a vessel or vessels to citizens of the United States or charters to aliens, and to secure Commission concurrence to such sales or charters prior to the conclusion thereof. Such owners and operators also were requested to confer with the Commission prior to the diversion of vessels from their normal prewar routes into other services, or their use in services where they were not normally employed before the war.

Owners and operators of vessels were also asked to carry strategic materials which must be imported. Especially, cooperation was sought in transportation of low-rate commodities, such as ore, in conjunction with higher-rate commodities, so that the importation of such low-rate commodities would not be unduly hampered by the increased demand for tonnage. For example, operators of vessels which carry general cargo to Africa and which normally return with cargoes of nonstrategic commodities are being requested to accept a minimum of 4,000 to 5,000 tons of manganese ore on each voyage. Arrangements are made with individual lines in accordance with the type and size of the vessels they are operating so that each line will carry its proportion of the low-grade and low-paying commodities in its respective trades.

In order to avoid chartering from one line to another, arrangements have been made through the Division whereby vessels of one operator will be handled by another on a consignment or agency fee basis.

Close liaison is being maintained between the Commission and the Army and Navy for the purpose of utilizing transports to augment commercial tonnage in the transportation of defense materials to the new bases in the Atlantic and the expanded ones in the Pacific. An example of this may be found in the use of Army transports, which were previously returning from Manila in ballast. Arrangements have now been made so that, in some cases, the Government will take title to ore, hemp, and other commodities in the Philippines so that they may be imported in these transports.

On April 30, 1941, the President wrote Chairman Land directing that at least 2,000,000 tons of merchant shipping be obtained in a manner that would make cargo space effective immediately in accomplishing our objective of all-out aid to the democracies. An undetermined number of vessels will be required for this service and plans and methods of carrying out this directive are under consideration.

Thus far, substantially all the ocean transportation companies have cooperated with the Commission in its efforts to secure the maximum use of available tonnage, to keep charter and freight rates from going to higher levels and to assure the importation of strategic and critical materials. However, with the steadily increasing shortage of tonnage to meet the needs of the United States, the refusal of a few to adhere to this voluntary plan of control is likely to defeat the objective of the plan and to hinder the attempt to secure maximum utilization of ocean-transportation facilities. The cooperating portion of the industry will have good cause to complain if noncooperating firms and foreign vessels are permitted to reap not only the benefit of carrying the high-rate cargo in place of low-rate cargo necessary for national defense, but the benefit also of the opportunity to secure—because of the resulting greater shortage of space—still higher rates for carrying cargo which the cooperating lines forego.

On May 1, 1941, the Maritime Commission advised steamship conferences and United States citizen owners of vessels of United States and other registries that some charges now being assessed, mostly other than conference rates, are excessive, and that all proposals which contemplate further increases in transportation costs must be viewed as unjustified. While the power to disapprove or cancel conference agreements for the fixing of rates, controlling of competition, pooling of freights, etc., exercised by the Commission under the provisions of section 15 of the Shipping Act, 1916, gives the Commission a measure of control over the carriers who are parties to these conference agreements, the Commission does not have a similar control over the rates of carriers in foreign trade not acting pursuant to conference agreements.

In order to make it possible for the Commission first, to obtain a measure of control over noncooperating firms and foreign vessels and, second, to secure amendment of those charges which are clearly excessive and to prevent other unjustifiable increases, H. R. No. 4700, known as the ship warrant bill, was passed by the House of Representatives on May 20, 1941.

By the terms of this bill the President would be empowered, whenever he might deem it to be in the interest of national defense, to authorize the Maritime Commission to issue warrants with respect to vessels owned by citizens of the United States, and, upon application by or on behalf of the owner, with respect to foreign-flag vessels not so owned. The President would so be empowered to act during the emergency declared by him on September 8, 1939, but not after June 30, 1943. The issuance and revocation of warrants would be subject to regulations issued by the Maritime Commission with the approval of the President. The bill provides that the warrants shall be predicated upon the agreement of owners or charterers to certain conditions to be complied with by the affected vessel, with respect to the voyages which the vessel shall undertake, the class of cargo or passengers to be carried, the maximum rate of charter hire or equivalent, and such incidental and supplementary matters as appear to the Commission to be necessary or expedient for the purposes of the warrant.

Vessels holding warrants would be entitled to priority over other merchant vessels with respect to the use of facilities for loading, discharging, lighterage or storage of cargo, bunkers, overhauling, drydock and repair, and would have priority among themselves as determined by the Commission. Persons fur-

nishing any of these facilities would be authorized or, with the approval of the President, might be required to grant such priorities.

The bill provides that the Commission in issuing warrants shall give priority to the importation into the United States of strategic and critical and other needed materials and collaborate closely with other defense agencies for the purpose of securing such materials. The Commission favors the enactment of this legislation and hopes the Senate will give it early consideration.

LAIID-UP FLEET

When the Commission took office, it inherited a laid-up fleet, composed of 196 vessels, which was a remnant of our World War built armada. By 1939, disposal of 83 of the least desirable of these vessels had been made. The remainder were retained as a reserve for emergency purposes and in recent months the Commission's foresight in adopting such a policy has been proven. Sixty-five vessels of this emergency reserve have been sold to the British to offset some of their shipping losses, while others have been reconditioned and are presently engaged in the transportation of strategic commodities, from Africa and the Far East.

VESSELS TRANSFERRED TO WAR AND NAVY DEPARTMENTS

Since the outbreak of the war in Europe, the Commission has furnished vessels directly to the War and Navy Departments, and has assisted them in obtaining privately owned vessels, for use as auxiliaries. Direct transfers of old ships owned by the Commission are effected without exchange of funds. In the case of vessels constructed under the Merchant Marine Act, 1936, and owned by the Commission, transfers are effected on the basis of the actual construction cost less depreciation. Where privately owned vessels constructed under the provisions of the Merchant Marine Act, 1936, have been taken over by the Navy, the owners have been reimbursed in an amount representing the sum actually paid by such owners, less depreciation; the balance of the full construction cost (construction-differential subsidy), less depreciation, being paid to the Commission. With respect to other privately owned tonnage which has been acquired by the Commission acting in the capacity of negotiator or purchaser for the account of the Army and Navy, a price considered fair and reasonable has been recommended by the Commission with payment being made either through a transfer of funds to the Commission or directly to the owners. In this connection, it should be pointed out that all transfers of privately owned vessels, both old and new, prior to the President's proclamation of May 27, 1941, have been voluntary.

As of May 24, 1941, a total of 55 vessels have been acquired by the Navy through the assistance of the Commission. Of these, 35 were purchased from private operators, 8 being newly constructed cargo vessels and 12 newly constructed tankers; 9 were under construction by the Commission and were transferred before completion; and 11 were owned by the Commission, of which 5 were new.

Up to May 24, 1941, 20 vessels have been transferred or allocated to the War Department. Of these, 6 were purchased from private operators; 12 old vessels and 2 under construction were obtained from the Commission.

In some instances where new vessels have been acquired by the Government from private owners, the owner's share of the purchase price has been deposited in accounts under supervision of the Commission, for use toward the payment for new vessels either under construction or to be constructed. In an effort to take care of the operator's trade requirements in the interim between the relinquishment of a vessel and the time when the replacement is delivered, the Commission, where possible, has made available for charter Commission-owned tonnage from the laid-up fleet. Charter party agreements covering such chartered vessels have been awarded only as a result of competitive bidding.

INSURANCE

The Merchant Marine Act, 1920, authorized the creation and maintenance of an insurance fund in which the legal or equitable interest of the United States in any vessel constructed or in process of construction may be insured against all hazards commonly covered by insurance policies. Under authority of this act, the Commission may provide part of the insurance which must be carried,

In accordance with the provisions of the various shipping acts, on vessels which are mortgaged to or chartered from the Commission.

Pursuant to an act approved June 29, 1940, the Commission is authorized to do a general war risk insurance and reinsurance business and to reinsure the American market with respect to marine risks when the American market cannot supply adequate protection for water-borne commerce of the United States. By the terms of the act, the Commission may also insure the personal effects of masters, officers, and crews of American ships, and may supply them with insurance against personal injury, death, and detention by an enemy. For the purposes of administering this war-risk insurance, the Commission received an appropriation of \$40,000,000. Authority for activities under this legislation expires March 10, 1942.

Up to this time, the Commission has exercised the authority granted by the act of June 29 to a very limited extent and has not authorized insurance for the general public. The Commission's general policy with respect to insurance is not to compete with the commercial market, inasmuch as the development of an ample American marine insurance system is an aid to the development of a merchant marine.

TRAINING

In enacting the Merchant Marine Act, 1936, the Congress determined that "It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine * * * manned with a trained and efficient citizen personnel."

Pursuant to this directive, the Commission in 1938 inaugurated a comprehensive training program. This program is divided into several phases: The training of new officer personnel through the cadet-training system; training of officer personnel from the ranks; State nautical schools; and preliminary training of apprentices as well as advanced training for experienced merchant marine personnel, through the United States Maritime Service.

The cadet-training system is designed to train young American citizens, selected through competitive examinations, to become officers in the merchant marine. This course covers a period of 4 years, the third of which is spent at a shore station, the other three being spent at sea on vessels of United States registry. After completion of this course a cadet is eligible for examination for a license as a third mate or third assistant engineer. After obtaining such a license and prior to taking a position as a licensed officer, a cadet is appointed as a cadet officer and is assigned for postgraduate training to a merchant ship. While in training, cadets and cadet officers receive their compensation from the operators of the vessels to which they are assigned. Cadet deck officers receive postgraduate training on Coast and Geodetic Survey vessels and cadet engineer officers receive postgraduate training in shipyards. From the inception of the cadet-training system, 688 cadets and 353 cadet officers, a total of 1,041 men, have been enrolled for training.

Coordinated with the Commission's cadet-training system are the 4 State nautical schools maintained by the State of California at San Francisco, the State of Massachusetts at Boston, the State of New York at Fort Schuyler, and the State of Pennsylvania at Philadelphia. The courses of training given at these schools will in the future cover a period of 3 years, with a standardized curriculum. The training ships now in use by these schools are loaned to them by the Federal Government and are under the control of the Maritime Commission. The present capacity of the schools is approximately 500 cadets; this number, however, will be increased when the Commission is able to assign new training ships to them. Graduates of the schools are eligible for examination for licenses as junior officers and may take postgraduate courses as cadet officers under the Commission's cadet-training system.

All cadets and cadet officers are eligible for membership in the Merchant Marine Naval Reserve and practically all of them are enrolled.

On July 14, 1939, the Commission established the United States Maritime Service, a voluntary organization of licensed and unlicensed citizen personnel of the merchant marine. Its purpose is to assist in the maintenance of a trained and efficient merchant marine personnel by providing an adequate training system for seamen of good character who serve aboard vessels of the Great Lakes or the high seas. The Maritime Service is administered for the Commission, at its expense and under rules and regulations which it prescribes, by the United States

Coast Guard under the general supervision of the Commission's Division of Training.

The Maritime Service offers three classes of training: (1) To licensed officers with deck and engineer ratings, 3 months; (2) to unlicensed seamen with deck, engineer, and steward ratings, 3 months; and (3) to apprentices for the deck, engine, and steward departments and as radio operators, 6 to 9 months. Regular enrollees who serve 8 months of a year in the merchant marine may return annually for a 1-month freshening course.

Officers' training schools are maintained at Fort Trumbull, New London, Conn., and at Government Island, Alameda, Calif. Unlicensed seamen schools are located at Hoffman Island in New York Harbor and at Alameda, Calif. Apprentice schools are located at St. Petersburg, Fla., Hueneme, Calif. (now in the course of construction), and at Gallups Island in Boston Harbor. The latter school specializes in radio and cooks and stewards training. Training ships are attached to each of the establishments. All maritime-service trainees are taught lifeboat work and are eligible for examination for certificates as lifeboat men upon graduation.

From the inception of the training program to May 24, 1941, some form of training has been given to a total of 14,585 men.

The training program which has been described was designed for the normal requirements of the merchant marine in time of peace. This program, however, has also fitted those in training for service in national defense in time of emergency. As an illustration, approximately 100 cadet officers who were members of the Merchant Marine Naval Reserve have been called to active duty as officers on naval vessels. All apprentices who can qualify are being enrolled in the Merchant Marine Naval Reserve, and licensed and unlicensed seamen are being urged to enroll and are doing so in appreciable numbers. The Navy Department has assured the Commission that such Naval Reservists will be permitted to remain with their merchant ships unless conditions change materially.

There is a present shortage of both licensed and unlicensed personnel to man the vessels now in operation. Without regard to the 212 vessels to be constructed pursuant to the Lease-Lend Act, the Commission has under contract for delivery between now and March 1943, 113 regular and 200 emergency ships. Assuming that 300 of these will be operated commercially under the American flag, approximately 10,500 unlicensed seamen and 3,000 licensed officers will be required to man them. Training facilities are being expanded to train approximately one-half this number. The capacities of the officers' training stations at Fort Trumbull and at Alameda are being doubled, and new officers will be trained from among qualified unlicensed seamen. With these increased facilities, about 1,600 new officers can be trained between now and December 31, 1942, and the State nautical schools, and the Commission's cadet-training system will graduate 432 additional new officers, making a total of 2,032. With a nucleus of such trained men on each ship, supplemented with experienced men who have temporarily retired from the sea, the remainder of the crews can be filled with untrained men for the unskilled jobs.

If the 212 vessels being constructed under the Lease-Lend Act are to be operated under the American flag, the number of men trained must be increased proportionately. Should this become necessary, the Commission expects to meet the problem by increasing its training facilities still further, or, as an alternative, by reducing the length of the courses.

CONCLUSION

I have attempted to give you a broad, all-over picture of the initial problems which confronted the Commission upon its establishment and the manner in which they have been dealt with, as well as the ever-increasing emergency requirements that must be met daily. More detailed information on our activities will be given as you desire it.

At this time, however, I wish to leave with you the spirit of optimism and reassurance. Compared with the shipping situation which confronted the Nation at the time of the World War, the one facing us today is in every way more favorable. Our program has been in operation for several years and is lending itself to rapid expansion. We are confident we can handle our job, big as it is. The Maritime Commission today is geared up to a speed which assures the people of America that the shipping phase of our national-defense effort and this country's aid to Britain will be kept fully apace with the growing demands upon it.

EXHIBIT No. 67, introduced on p. 1358, is on file with the committee

EXHIBIT No. 68

DIRECTIVE

O. O. 160/28059 Misc.

WAR DEPARTMENT,
OFFICE OF THE UNDER SECRETARY,
Washington, D. C., May 20, 1941.

Memorandum for: The Chiefs of Supply Arms and Service.
Subject: Subcontracting of Prime Defense Orders.

1. Your attention is invited to the memorandum enclosed dated February 19, 1941, and signed by the Secretary of War, on the subject of "Ordnance Production under the National Defense Program." Attention is therein directed to the necessity of using every facility available for expediting the delivery of materials required for the Army.

2. Since that date, the requirements for the Army, as well as those necessary under the Lease-Lend Act, have increased to a far greater extent than the additional facilities in the plants of our contractors, thus creating a condition wherein estimated deliveries are far behind actual requirements in many cases.

3. It is therefore imperative that requirements and not merely delivery schedules be our goal; that estimated delivery on many contracts be greatly accelerated; that initial deliveries be not delayed awaiting new plant facilities or new single-purpose machines; that available facilities now under contract be thoroughly utilized; and that, in order to expedite deliveries, the facilities of subcontractors be utilized to the greatest extent practicable.

4. Attention is called to my Directives of December 20, 1940, "Use of Subcontractors in Defense Program," and of February 17, 1941, on "Cooperation with Defense Contract Service in Facilitating Subcontracting." Full advantage has not yet been taken by prime contractors of the lists and data on available facilities and equipment maintained in the District Procurement Offices and by the Defense Contract Service in collaboration with the District Offices as specified in my Directive of February 17, 1941.

5. To coordinate and effectively utilize these various sources of assistance, it is directed that—

(a) a liaison officer or qualified civilian be appointed in each District Procurement Office to contact the nearest District Office of the Defense Contract Service for the purpose of using more fully their expert personnel, the data on record, and the information compiled from various sources, and to make such information available to prime contractors with the general purpose of expediting deliveries through farming out the work to plants with available facilities.

(b) contracting officers, with the purpose of assisting prime contractors to effect greater use of subcontracts, will request each prime contractor engaged on present contracts, where estimated deliveries do not meet requirements, to file a list of components which he has not the facilities to produce in the required quantity and time. On future contracts for critical items suppliers will be required to submit such lists with their bids, estimates, or quotations. These lists will designate (1) the components for which he has already determined adequate subcontracting facilities and (2) those for which sources of supply must still be located.

Contracting officers will furnish copies of such lists to the appropriate District Procurement Office with a view to carrying out (a) above.

(c) new facilities be not authorized without due study of the alternative of utilizing fully the existing facilities of prime contractors or facilities available through subcontracts.

(d) procurement agencies examine the possibilities of breaking up orders into smaller contracts when production can be expedited thereby without detriment to quality requirements.

(Signed) ROBERT P. PATTERSON,
Under Secretary of War.

EXHIBIT No. 69

DIRECTIVE

381—Facilities

WAR DEPARTMENT,
OFFICE OF THE ASSISTANT SECRETARY,
Washington, D. C., December 20, 1940.

Subject: Use of Subcontractors in Defense Program

To: Chiefs of Supply Arms and Services

(Copy for -----)

1. Shortages of manufacturing capacity involving especially machine tools and also certain types of skilled labor, have developed as serious obstacles in the national defense procurement program. It is believed that this condition can be eased to a considerable extent by prime contractors subletting more of their work to small shops that are already equipped and named and have idle capacity that is immediately available.

2. It is in the interest of the present program that this situation be brought to the attention of all manufacturers who have received or who plan to undertake Government orders. They should be encouraged by procurement officers to consider as part of their resources not only their own facilities but assistance that may be available to them from qualified small shops in their localities.

3. The "farming out" of defense orders should have the effect of speeding up production without the investment of additional capital for plant expansion or new machine tool equipment. It will bring into the defense effort many owner-operated plants with their skilled labor, tools, and equipment which thus far have not participated and are urgently needed. By farming out the load to the small communities, the migration of workers from their homes to the industrial centers will be prevented and the problems of housing and post-emergency adjustment reduced.

4. While advocating the subletting of contracts on a broad scale as essential to the success of the defense program, the War Department is not departing from its traditional policy of leaving with the prime contractor full responsibility for the execution of his obligation under the contract. He will be expected to select his own subcontractors as in the past, and he will decide what part, if any, of the work for which he is responsible, is to be performed by them. Financial assistance, if needed by such subcontractors, can be provided through existing agencies such as R. F. C., Federal Reserve Banks, etc.

5. This communication is being furnished the Supply Arms and Services in mimeographed form and sufficient copies are available for full distribution to all procuring agencies and procurement planning officers in Washington and in the field.

(Signed) ROBERT P. PATTERSON,
The Assistant Secretary of War.

EXHIBIT No. 70

DIRECTIVE

WAR DEPARTMENT,
Washington, February 17, 1941.

Memorandum to: Chiefs of all Supply Arms and Services.

(Copy for -----)

Subject: Cooperation with Defense Contract Service in Facilitating Sub-Contracting.

1. The following extract from a letter from this office, December 20, 1940, Subject: Use of Sub-Contractors in Defense Program, outlines the policy of the War Department in regard to the "farming out" by prime contractors of Government orders awarded to them:

"While advocating the subletting of contracts on a broad scale as essential to the success of the defense program, the War Department is not departing from its traditional policy of leaving with the prime contractor full responsibility for the execution of his obligation under the contract. He will be expected to select his own subcontractors as in the past, and he will decide what part, if any, of the work for which he is responsible, is to be performed by them. Financial assistance, if needed by such subcontractors, can be provided through existing agencies such as R. F. C., Federal Reserve Banks, etc."

2. It is understood that nothing in the following is intended to change the present duties or responsibilities of the War Department procurement officers involved, but rather, that by an understanding worked out in detail locally, the War Department procuring agencies and the Defense Contract Service may

cooperate, each in its own proper field, in attaining a common objective. With this end in view, the following outline is furnished, showing how the Defense Contract Service may be helpful to the War Department and the nature of the cooperation needed from the latter to make the system successful.

3. Representatives of the twelve Federal Reserve Banks met with officials of the Office of Production Management (Defense Commission) in Washington, February 7, 1941, and completed a preliminary organization to assist the production of defense equipment through subcontracting. The new organization, to be known as Defense Contract Service, will function through field offices located in the twelve Federal Reserve Banks and 24 branch banks. Each office will have a staff of full- and part-time technical experts. The plan of organization in each district is shown on the attached chart.

4. It will be noted that the field offices are organized in two sections, one having to do with business procedures, subcontracting and technical service, and the other with fiscal and legal matters. A description of the duties and responsibilities was outlined at the meeting on February 7, as follows:

(a) *District Coordinator*.—He will be an outstanding local industrialist who will serve without compensation in a general supervisory and coordinating capacity.

(b) *District Manager*.—Directly under the district coordinator will be the District Manager. He will be a production-minded business executive who will be adequately compensated and will be on a full-time basis. He will be responsible for such contacts with the Army procurement districts as may be necessary for purposes of coordination and will act as a clearing house between government prime contractors, who may need additional production capacity, and potential subcontractors, who may have such capacity available. He will have an adequate technical and clerical staff to assist him in his duties.

(c) *Federal Reserve Bank President*.—Opposite the District Coordinator will be the Federal Reserve Bank President. He will exercise general supervision over the fiscal affairs of the field office and act in an advisory capacity on the financial features of the undertaking.

(d) *Federal Reserve Defense Contract Officer*.—Under the direction of the Federal Reserve Contract Officer will be facilities for financial and contract consultation, and assistance where needed between defense prime contractors and their subcontractors. This executive will also act as administrative director of the district office of the Defense Contract Service.

5. In addition to the above organization, the Defense Contract Service will have the services of local engineers who will be designated by the five engineering societies, Civil, Electrical, Mechanical, Chemical, and Mining, and other technical specialists as needed, to act in advisory capacities on special problems. Chiefs of Army procurement districts will also be invited to work with the Defense Contract Service in an advisory capacity.

6. While the complete details of the O. P. M.'s Defense Contract Service have not been worked out, it is considered likely that the Federal Reserve Agencies will soon contact Army procurement offices to determine the best procedure for cooperation between the two groups. For this reason, it is believed advisable at this time to outline the general types of information that may be made available by District Procurement Officers to properly identified local representatives of that organization, if considered essential to the effective operation of the "farming out" program.

(a) The names of allocated facilities and of facilities formerly allocated or listed as sources of supply. This will include bidders' lists, where appropriate.

(b) Production estimates and other data obtained by a plant survey, except in cases where the management specifically requested that the information be treated as confidential.

(c) Facilitate access of Defense Contract Service and potential subcontractors to specifications, drawings, photographs, and descriptions of items being currently purchased or yet to be purchased, if not of a secret or confidential nature.

(d) Lists and brochures furnished the districts by chambers of commerce, trade associations, and similar organizations.

(e) Facilitate access to district sample rooms to potential contractors and subcontractors who desire to inspect exhibits there.

7. It is appreciated that district offices are generally overburdened with their own work at this time and that few of them have sufficient clerical or technical personnel to meet the needs of their primary jobs. For this reason, it probably will be impractical for them to handle any extra work entailed by the requests for information from the agencies of the Defense Contract Service. When considered necessary by the district procurement officer, these agencies will be expected to furnish to him the required personnel to copy or compile such data

from the district records as the procurement officer shall consider available. The Defense Contract Service may, on the other hand, relieve the Army procurement agencies of the necessity for interviewing many small businessmen who can be of service only as subcontractors and of correspondence with them which has in the past been a very great burden.

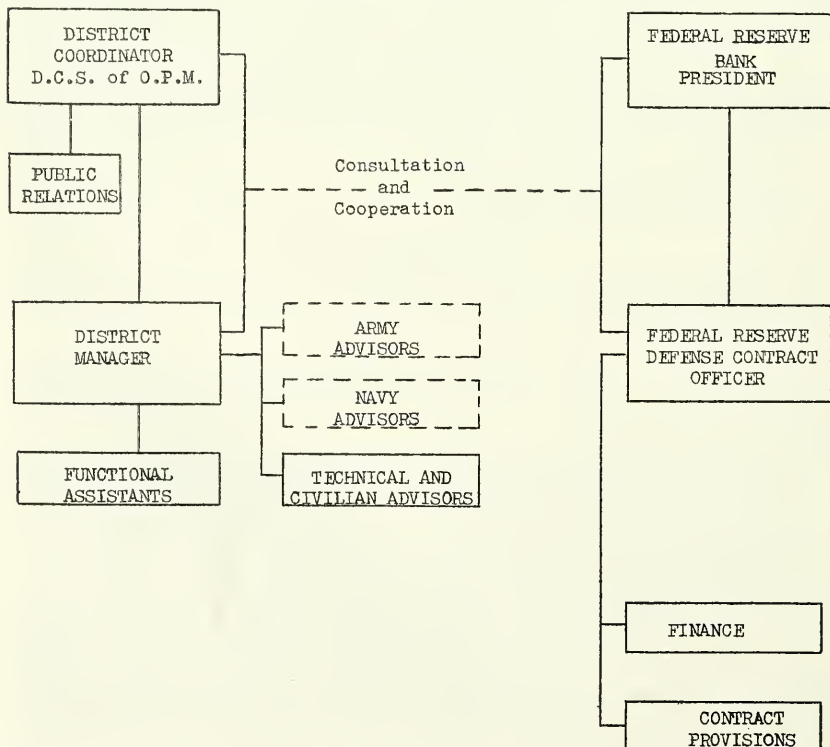
8. While it is believed that the principal value of the Defense Contract Service to the War Department's current program will be in the subcontract field, the organization's objectives include the listing and encouraging of manufacturers to bid directly on Government contracts. Representatives of plants considered as suitable prime contractors will be referred by the Defense Contract Service to the purchasing and contracting officers or procurement planning officers for the necessary information on which to submit bids. Lists of all awards of government contracts will be furnished directly to the banks by the Office of Production Management. Subcontractors listed in the bank districts will be analyzed and where suitable, encouraged to contact these prime contractors to obtain a share of the work.

9. Copies of the Directories of Allocated Facilities, the Procurement Planning Bulletin, the Army Purchase Information Bulletin, and the Guide to Industrial Symbols, as published by this office, will be furnished directly to the Federal Reserve Banks. These publications will continue to carry a "restricted" classification and information contained therein will not be released to the press or used for other than official purposes by agencies of the Federal Government.

10. The foregoing information and instructions will now answer all of the questions that will come up in connection with the setting up of the Defense Contract Service in the Federal Reserve Banks. It is believed, however, that an intent and spirit of full cooperation with respect to the "farming out" program has been indicated. Difficulties that develop in the field should be adjusted by direct contact with the Federal Reserve Banks. Where this cannot be done, recommendations should be made promptly to this office with the understanding

PLAN OF ORGANIZATION OF THE FIELD OFFICES OF DEFENSE CONTRACT SERVICE

1 Inclosure, Chart.



that the program above outlined is intended to be of real service in the prosecution of the defense program.

(Signed) ROBERT P. PATTERSON,
Under Secretary of War.

OFFICE OF PRODUCTION MANAGEMENT

DEFENSE CONTRACT SERVICE

Immediate Release.

PM 130
MARCH 5, 1941.

Another city—San Antonio, Texas—was added today to the list of those to be visited by Defense Contract Service officials, according to Robert L. Mehornay, Chief of the Service, Office of Production Management.

At the same time, a correction is made in press release PM-125 issued from this office yesterday. Release PM-125 stated that Joseph Trecker, of the Subcontracting Unit, Defense Contract Service, would visit the San Francisco area in company with Army and Navy officers on March 4. Mr. Trecker will visit San Francisco on March 19.

In addition to the west coast survey, Mr. Trecker will meet with Defense Contract Service representatives and local Army and Navy officers in San Antonio, Texas, on March 13. Colonel Ray M. Hare and Commander E. P. A. Simpson, members of the Facilities Division, Army and Navy Munitions Board, will conduct the meeting jointly with Mr. Trecker. Such collaboration with the Army and Navy is a fixed policy of the Defense Contract Service.

EXHIBIT No. 71

DIRECTIVE

O. O. 160/28059 Misc.—Incl. 1.
WAR DEPARTMENT,

Washington, February 19, 1941.

Subject: Ordnance Production Under the National Defense Program.

To: The Chief of Ordnance.

The Chiefs of the Ordnance Procurement Districts.

The Commanding Generals of the Manufacturing Arsenal.

The Commanding Officers of Ordnance Plants and Works.

1. I desire to bring to the attention of those Officers and Agencies of the Ordnance Department charged with the execution of this production program and, through them, to impress upon all commercial contractors having defense orders, the necessity for expediting action to the maximum possible extent. We have passed through the initial stage when emphasis was centered on the placing of orders which inaugurated the mobilization of the material resources and the industrial facilities of the country. We are confronted now with the even more difficult requirement of prompt, decisive, and energetic action in the prosecution of the production program on which the Department is engaged, to insure earliest possible deliveries on critical materials so vital to the National Defense of the United States.

2. I would like to emphasize the necessity for the most searching analysis of all factors which may affect the production program, and which, if overlooked or for which an adequate solution is not provided, may jeopardize its successful execution. The urgent need is for early production. By careful planning, foresight, and timely action, difficulties can be anticipated and overcome, thereby assuring success.

3. New production facilities must be brought into full operation with the minimum delay. You may expect to encounter many difficulties in obtaining new machine tools and other production equipment at the time, in the quantities, and of the types desired. This demands that the maximum utilization be made of such equipment as may be on hand and available, that greater reliance be placed upon procurable used equipment to meet shortages resulting from non-availability of new equipment, that methods of production be devised or improvised which can be employed with available or procurable used equipment, and that subcontracting for parts and assemblies be utilized to the maximum extent both for the purpose of reducing requirements for new production equipment and of expediting production. Schedules of production must be met; when possible they should be expedited and bettered. Since these depend in large measure

upon the availability of suitable equipment, the utmost ingenuity will have to be exercised to overcome the adverse effects of known or anticipated shortages.

4. To prevent the possibility of any production delay which would result from inadequate provision for their supply, the necessary action should be initiated, and close follow-up maintained, to insure availability of the following at the time required:

(a) All jigs, fixtures, tools, gages, and other manufacturing aids necessary for the execution of each order.

(b) All materials required to complete each order. In view of the large orders on the books of manufacturers of many classes of material required for Ordnance production, it is essential that requirements be foreseen and orders placed sufficiently far in advance to insure deliveries when required.

(c) The necessary personnel for full operation. This will involve the establishing of local training systems to the extent necessary to insure sufficient trained workers for capacity operation.

The accomplishment of the above demands the most careful planning and proper scheduling to assure completion of orders on schedule.

5. All existing production capacity, and new capacity being created, should be utilized to the fullest extent. The thought of idle equipment, or of facilities not employed to capacity, is intolerable in the present emergency. The manufacturing Arsenal of the Ordnance Department have already been placed on a full three shifts per day, six days per week basis, with Sunday operation authorized to the extent necessary to relieve choke points in securing balanced production. The situation at each Arsenal should again be reviewed to determine whether or not further increases in production schedules may not be possible through additional personnel and/or augmentation of the night shifts.

6. In principle, the same applies to commercial plants engaged on production for National Defense. It should be impressed upon all contractors that the objective is to obtain maximum production in the minimum of time. Examination of all contracts is directed in order to determine the extent which it may be practicable to expedite production through increases in personnel, in the number of shifts, and the hours of work per week. If changes in contracts are necessary or desirable to obtain necessary production increase, prompt action should be initiated accordingly.

7. The greatest care must be exercised in the selection and training of inspectors; standards of inspection must be established for their guidance. While material accepted must be of the requisite quality and workmanship, and comply with the drawings and specifications under which it is procured, the whole inspection mechanism and procedure must be so set up that the production program will be furthered thereby rather than hampered.

8. I have the utmost confidence in the ability of American industry and the Ordnance Department to solve these gigantic production problems. I am sure that the fullest cooperation will prevail with the Office of Production Management to the end that the National Defense Program of the United States will be promptly and successfully accomplished.

HENRY L. STIMSON,
Secretary of War.

EXHIBIT No. 72

DIRECTIVE

All communications should be accompanied by carbon copy and addressed to

To insure prompt attention, in reply refer to No. ——.
Attention of Industrial Service, District Control Division

ABQ/1b/dlt

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ORDNANCE,
Washington, June 3, 1941.

Subject: Subcontracting of Prime Defense Orders.
To: All Districts.

1. Forwarded herewith for your information and guidance is copy of a memorandum from the Under Secretary of War dated May 20, 1941, together with a copy of the memorandum of February 19, 1941, referred to in Paragraph 1, therein.

2. The appointment of a liaison officer to contact the nearest District Office of the Defense Contract Service, as provided in Paragraph 5a of the May 20th memorandum, should be accomplished at once.

3. In carrying out the spirit of the policies announced in Paragraph 5a, c, and d of the May 20th memorandum it is desired that the District Offices keep fully in mind the policy which has been announced in respect to expansion of facilities of both prime and subcontractors. A summary of this policy follows:

"1. It is not the policy of the Ordnance Department to originate any recommendation for plant expansion of subcontractors engaged in manufacturing supplies for companies having prime contracts with the Ordnance Department for the reason that the country at large has to be taken into consideration before selection is made of the particular plant to be expanded, in case increased capacity is actually required.

"2. In the event the Office of Production Management should find that a shortage exists in the type of supplies for the manufacture of which the subcontractor requests expansion of facilities, determination will be made of the particular facilities of the country to be expanded.

"3. Prompt procurement of supplies is the objective of the Ordnance Department, and the above policy of refusing to authorize expansion of facilities by subcontractors except in extraordinary cases serves a two-fold purpose:

"(a) It prevents duplication of facilities where sufficient capacity already exists in some other plant.

"(b) It furthers the objective of the Office of Production Management, which is to secure a wide distribution of the munition load by means of:

"(1) Subcontracting, not only by prime contractors but also by subcontractors,

"(2) Utilizing to the utmost extent possible existing available facilities."

By order of the Chief of Ordnance:

A. B. QUINTON, Jr.,
Lt. Col., Ord. Dept., Assistant.

2 Incls.

Memo. of May 20, 1941.

Memo. of Feb. 19, 1941.

EXHIBIT No. 73

REDUCTION OF MANUFACTURING IN NAVY YARDS TO RELEASE PERSONNEL AND EQUIPMENT FOR SHIPBUILDING AND REPAIR PROGRAM

NY/L8-3 (400517)
SOSED-1-OMB

17 May 1940

From: The Assistant Secretary of the Navy (Shore Establishments Division).
To: The Commandant, Navy Yard, Portsmouth, N. H.

The Commandant, Navy Yard, Boston, Mass.

The Commandant, Navy Yard, New York, N.Y.

The Commandant, Navy Yard, Philadelphia, Pa.

The Commandant, Navy Yard, Norfolk, Va.

The Commandant, Navy Yard, Charleston, S. C.

The Commandant, Navy Yard, Mare Island, Calif.

The Commandant, Navy Yard, Puget Sound, Wash.

The Commandant, Navy Yard, Pearl Harbor, T. H.

The Commandant, Navy Yard, Cavite, P. I.

Subject: Navy Yards—Material Manufacture Reduction of Title "Z" work.

Reference: (a) SOSED-5d-NE letter NY/L8-3(391130) of 30 November 1939.

1. A substantial reduction of title "Z" manufacturing in Navy Yards will be required because of the accelerated shipbuilding and ship-repair programs now contemplated.

2. Yards should be prepared to release the men and equipment ordinarily employed on title "Z" work to ship title work except for those items such as paints, anchor chain, varnishes, boats, etc., that cannot be satisfactorily purchased from commercial sources. Where such procedure is feasible requisitions for materials normally Navy manufactured should offer the use of navy owned dies, jigs, patterns, etc. Yards may continue to employ single-purpose equipment provided personnel cannot be profitably employed otherwise. In no case shall the employment of either men or equipment on title "Z" work be permitted to jeopardize the acceleration of ship title work assigned.

3. Yards will report to this office their recommendations on items now manufactured as follows:

(a) Items authorized whose manufacture can be discontinued as soon as the men or equipment can be employed on ship title work.

(b) Items now authorized which might be purchased but the manufacture of which should be continued for the time being due to commitments or production schedules.

(c) Items now authorized on which production should continue.

4. Upon receipt of the information requested above this office will issue a revised list of articles that the yards will be authorized to manufacture. Pending the issue of this list all manufacturing requests shall state upon the face thereof the effect, if any, upon ship title work, the invoice price to the receiving activity of similar articles last manufactured by the yard, and when available the prevailing commercial price. The foregoing is in addition to the usual information regarding stock status and estimated costs.

C. W. FISHER,
By direction.

CC: All Bureau Chiefs.

EXHIBIT No. 74

TRANSFER OF NAVY MANUFACTURING TO PRIVATE CONCERNS— CHANGE OF SPECIFICATIONS TO CONFORM WITH PRIVATE INDUSTRIAL METHODS

SOSED-O-DF LL/P11-1 (390106-11)

NAVY DEPARTMENT,
Washington, December 3, 1940.

From: The Secretary of the Navy.
To: All Concerned.

Subject: Expediting National Defense—Release of men, equipment, shop, and storage space for urgent national-defense needs.

References: (a) Asst. Secnav. (S. E. D.) circ. Let., NY/L8-3 (400517), dated 17 May, 1940. (b) Par. 9, Secnav, Circ. Let., LL/P11-1 (390106-7), SOSED-3-GFL-5/21, dated 21 May, 1940.

1. Recent inspection of naval industrial shore establishments have developed the fact that additional tools and facilities are needed to carry on the ship-building, conversion, modernization, and Fleet maintenance work at navy yards. At the same time, it has been observed that men, tools, and plant facilities are engaged in manufacturing articles that could be obtained from private industry. In some cases yards are requesting additional tools and plant expansions for purely manufacturing purposes, although the capacity of commercial sources of supply has not been absorbed, and the normal work-load of the yard does not warrant expansion of either the plant or equipment. Similarly, requests for additional storage space might be considerably reduced by a reduction in the quantity of certain commercial articles carried in naval storehouses, provided commercial firms or warehouses could be found willing to carry adequate stocks for navy yard use under satisfactory arrangements as to price and quick delivery.

2. It is desired that every advantage be taken of the availability of commercial establishments to assist the Navy's shore establishments in devoting their attention to work of a strictly naval character that cannot be undertaken outside.

3. It is therefore directed that all addresses obtain commercial articles and special naval material from commercial sources, as contrasted with manufacturing in government plants, whenever such action is to the advantage of the government, thus making available for the naval establishments' own special work the men, machines, shop, and storage space thereby released.

4. There are a great variety of items regarding which the procedure outlined above should assist in enabling the Navy to meet the requirements of national defense. Among these may be mentioned—ships' boats, valves, fittings, many castings, electrical fittings, forgings, bolts, nuts, rivets, etc., etc.

5. In this connection, it is also the desire of the Navy Department that wherever practicable and suitable, commercial specifications be used rather than the special Navy specifications, in order that there may be as little dislocation as possible in the production methods of private industry.

Dept. Dist.: IV, V, VIc, d, h, i, I-.

(Signed) FRANK KNOX.

EXHIBIT No. 75

LETTER TO CONTRACTORS AND PROSPECTIVE CONTRACTORS—SUB-
CONTRACTING OR "FARMING OUT" MORE WORKNAVY DEPARTMENT,
Washington, January 8, 1941.SOSED-1-ELC-1/8
JJ40/LS-3 (401223)

Subject: Expediting the Defense Program through Sub-Contracting or "Farming Out."

DEAR SIR: 1. The attention of all contractors and prospective contractors for Navy orders should be called to the great importance of speed in making deliveries; and, to this end, they should be urged to make the greatest possible use of subcontractors, whose capacity would not otherwise be fully utilized on defense work.

2. There are only a comparatively small number of companies which, because of their experience and well-rounded capacity, are normally considered as qualified to take prime Navy contracts. There are, however, especially in the light of the present emergency, many thousands of machine shops, foundries, and plants of special types, many of them small, some, however, large, besides countless departments of companies whose main product is perhaps far removed from Navy requirements, which have the equipment and personnel which could, with a certain amount of adaptation, perform operations that a given prime contractor could not himself quickly handle.

3. Under ordinary circumstances a manufacturer might be warranted in buying extra equipment or taking the extra time necessary to do the work with the resources in his shop, rather than to farm it out. Today, however, neither of these courses should be followed except as a last resort. America's toolmaking and equipment extending industries have more than they can do already in the way of constructing that equipment of which we have no adequate supply anywhere. Even where new and more efficient equipment should be ordered, it is important that in the meantime as much use as possible be made of older equipment already in existence.

4. Companies having Navy contracts, but with facilities of certain types in excess of those which can be immediately used, are requested to make these facilities available to other companies engaged on defense work so long as they can do this without impairing their ability to expedite Navy orders as they come along.

5. The Department realizes that an extension of subcontracting will require an administrative effort on the part of contractors, and that its success depends upon the intelligence and energy with which it is conducted. The situation is so serious and the necessity of meeting delivery schedules is so important that I feel justified in requesting your cooperation in this matter, and further to request that you exercise every possible recourse that may be necessary to enable you to meet the Navy's delivery requirements on its defense orders.

JAMES FORRESTAL,
Under Secretary of the Navy.

EXHIBIT No. 76

EXPEDITE SHIPBUILDING—CONTRACTORS TO USE EXTRA SHIFTS,
OVERTIME—MORE SUBCONTRACTINGLL/P11-1 (390106-12)
NAVY DEPARTMENT,
Washington, January 15, 1941.

From: The Secretary of the Navy.

To: The Chief of the Bureau of Ships,
All Inspectors of Machinery, U. S. N.,
All Inspectors of Naval Material.

SUBJECT: National Defense Shipbuilding Program—Expedition and Prosecution of Work.

Enclosures: (A) SecNav letter LL/P11-1 (390106-12) to Chief of Bureau of Ships and All Supervisors of Shipbuilding, of even date. (B) SecNav letter LL/P11-1 (390106-12) to Chief of Bureau of Ships and Commandants All Navy Yards, of even date.

1. The Department desires to bring to the attention of all Inspectors of Machinery, U. S. N. and all Inspectors of Naval Material, and all contractors and subcontractors holding contracts or orders for material, equipment, and apparatus forming a part of the Naval shipbuilding program the urgent necessity of prosecuting the construction of such vessels and expediting their completion with the utmost possible vigor, having particular reference to the plea of the Office of Production Management to the workers and industrial management of the Nation on January 7, 1941. In obtaining the response to this plea for speed the Navy Department can set a high example by addressing itself promptly and decisively to the problem of raising the tempo of industrial production. In the interest of accomplishing this objective the following instructions are promulgated.

2. During the present emergency, it is directed that all Inspectors of Machinery, U. S. N., and all Inspectors of Naval Material act with full authority of the Bureau of Ships, taking final local action to the greatest extent possible. This decentralized authority shall be employed for the utmost expedition of the Shipbuilding Program. All Inspectors will be responsible for the progress of shipbuilding under their supervision. This does not, of course, relieve the contractor from any of his responsibility and contractual obligation.

3. Action on minor changes in plans, specifications, and technical features under the cognizance of the Bureau of Ships shall be taken locally by Inspectors of Machinery, U. S. N., and Inspectors of Naval Material provided no change in contract price is involved, bearing in mind that material must be of such quality and workmanship as to accomplish the purpose for which it is purchased. No changes will be made which will affect installation without approval of the Navy Yards or Supervisors of Shipbuilding. Attention is called to enclosures (A) and (B). It will be noted that the Commandants of Navy Yards and the Supervisors of Shipbuilding have full authority to give any instructions to Inspectors concerning inspection or design of material for ships under their supervision. These instructions will be given directly by the Commandants of the Yards and the Supervisors and not through the Bureau. Only those matters upon which the Inspector desires to receive comment of the Bureau of Ships will be submitted to the Bureau.

4. Inspectors of Machinery, U. S. N., and Inspectors of Naval Material will insure that delivery dates are in accord with the expedited construction program. Where necessary to secure deliveries desired, Inspectors of one district will communicate directly with Inspectors of another district. Only in cases where problems cannot be handled locally should the Bureau of Ships be called on for assistance. Inspectors are authorized to alter the sequence of deliveries of material to conform to the delivery dates required by building yards, provided such action will not result in claim for damages or waiver of penalties.

5. Overtime and shift work should be fully utilized to expedite the building program. To this end, a 6-day, 48-hour week, as a first shift should be adopted as standard by the contractors, with second and third shifts built up as rapidly and as completely as will insure the greatest progress. The extra cost of overtime and shift work will be allowed the contractors in accordance with the terms of the contract. Where increased cost to the Government, due to the employment of overtime and shift work, would be incurred for which no specific provision is made in the contract, overtime and shift work will not be ordered unless covered by a change under the contract issued by the Bureau. The Inspectors are directed to urge the contractors to increase their working force as rapidly as possible to the end that the maximum productive capacity may be attained. The contractors should be urged to work all employees such hours per day and/or per week as will best further the Defense Program, except that Sunday work should be kept to a minimum. The personnel, technical and clerical, in the Inspector's own office shall be worked such hours as are necessary, overtime pay being allowed to such employees entitled to it as provided by law.

6. It is desired that the Inspectors urge contractors to supplement the productive capacity of their plants by the maximum practicable use of available commercial capacity in their vicinity wherever such action will expedite their work. The Inspectors will require all contractors to make periodical reports of progress on individual contracts to shipbuilding yards in order that the

effect of delays in deliveries may be minimized and full advantage taken of early deliveries. These reports should be forwarded via the Inspector concerned.

7. All Inspectors of Machinery, U. S. N. and Inspectors of Naval Material will inform the contractors in their inspection districts and/or the contractors to whose plants they are assigned that in connection with actual contracts, if such contracts are signed or letters of intent received and accepted, no matters pertaining thereto are to be referred to the Bureau of Ships either by mail or by visit of contractors' representatives unless such matters have been referred first to the Inspectors concerned or with their consent.

8. The Department desires that contractors take all practicable steps to acquaint the working force with the need for the utmost effort by all hands and, by notices, addresses, or other appropriate means, to stimulate their enthusiastic cooperation in speeding up the Defense Program. The Inspectors are directed to cooperate with and assist the contractors to the fullest extent to this end.

9. This letter supersedes, during the period of emergency, all previous instructions with which it may conflict. Each Inspector will transmit a copy of this letter to the contractors of his district.

FRANK KNOX.

Copies to: Under Sec. Nav. (1); Asst. Sec. Nav. (1); Mr. Knudsen (3); Chairman, Senate Naval Affairs Comm. (2); Chairman, House Naval Affairs Comm. (2); C. N. O. (5); All Bureaus (3); Coord. of Shipbuilding (1); All Comdts. Naval Districts (5); Comdts. all N. Yds. (10); S. O. S. E. D. (3); Comp. Bd. (3); J. A. G. (2); Gen. Inspector (2); Chief of Bureau of Ships (5); All I. M. (15); All I. N. M. (15).

EXHIBIT No. 77

SUBCONTRACTING OR "FARMING OUT" MORE WORK

NAVY DEPARTMENT,
Washington, Jan. 28, 1941.

SOSED-3-GFD-1/24
QM/L4-3 (33) (401230)

From: The Secretary of the Navy.

To: Commandants of All Naval Districts.

Commandants and Commanding Officers of Navy Yards and Naval Stations.
All Bureaus and Offices, Navy Department, and Headquarters, U. S. Marine Corps.

Subject: Expediting National Defense—Use of unutilized industrial facilities—subcontracting or "farming out."

Reference: (a) Asst. Secnav. (SED) circular letter NY/L8-3 (400517), dated 17 May 1940. (b) Par. 9, Secnav. circ. let. LL/P11-1 (390106-7), SOSED-3-GFD-5/21, dated 21 May 1940. (c) Navy Dept. circ. let. SOSED-O, LL/P11-1 (390106-11), dated 3 December 1940. (d) Ast. Nov. dispatch 241551, January 1941, to Navy Yards, Portsmouth, Boston, New York, Philadelphia, Norfolk, Charleston, Mare Island, and Puget Sound.

1. Attention is invited to reference (a), which directed that commercial articles and special naval material be obtained from commercial sources, as contrasted with manufacturing in government plants, whenever such action is to the advantage of the government. However, reference (a), although somewhat general in character, related more particularly to naval manufacturing or Title "Z" work. The increasing importance of expediting all national defense work has been made known to the nation in recent statements from the President and from Mr. William S. Knudsen.

2. There are throughout the country industrial plants of greater or less capacity, and even small shops, which have the industrial facilities and manpower that could and should be utilized in national defense work. As the

national defense program gathers momentum it will become increasingly difficult to obtain and retain mechanics and to obtain additional machine tools and other plant facilities. It is, therefore, directed that all addressees "farm out" or make contracts with such shops for all classes of work assigned to naval establishments whenever such action will expedite deliveries and avoid delays in all kinds of naval work. Recent letters from the Navy Department have greatly decentralized authority to the field in regard to purchases of material and contracts for work.

3. It is the purpose of this letter to emphasize to all addressees the importance of such "subcontracting" or "farming out", if the Navy is to meet the continually increasing demands that are being made upon it. All hands must come to a fuller realization of the gravity of the situation and local considerations or desires for ideal equalization of work-loads must be sacrificed, if necessary, in the interest of expediting national defense.

4. Further steps to facilitate procedure are under consideration by the Navy Department, regarding which all addressees will be informed if and when they are consummated. In the meantime, prompt and decisive action is expected from all Commandants and Commanding Officers. Although it is not desired to burden the yards and stations with additional paper work, brief reports of the action taken by each addressee will be appreciated, together with any suggestions or recommendations as to how the objects set forth in this letter can be best accomplished. Excess facilities should be reported in order that they may be diverted for defense purposes. See reference (d).

5. All naval work must be expedited to the maximum. "Dollars cannot buy yesterday."

(Signed) FRANK KNOX.

Department Distribution: IV, V, VI, VII, VIII, IX.

Copy to:

Mr. Wm. S. Knudson, Office of Production Management.
Mr. Morris L. Cooke, Office of Production Management.
Mr. R. L. Mehornay, Office of Production Management.

EXHIBIT No. 78

O. P. M. DEFENSE CONTRACT SERVICE—ORGANIZATION AND OBJECTIVES—NAVY LIAISON OFFICER

NAVY DEPARTMENT,
Washington, February 26, 1941.

Op-23M-10-JB
EE1 (3)/P16-3 (410226)
Serial 41923

From: Secretary of the Navy.

To: All Bureaus and Offices, Navy Department.

Subject: Navy Department participation in objectives of Defense Contract Service, Office of Production Management.

Reference: (a) Secretary of the Navy letter 28 January 1941. SOSED-3-GFD-1/24 QM/L4-3(33) (401230)—Re: Expediting National Defense. (b) Secretary of the Navy letter of 6 June 1940, Op-23M-1, QM/L24(400606) Re: Information Pertaining to Facilities and Services.

1. There has been organized within the Office of Production Management a division designated "Defense Contract Service," Mr. Robert L. Mehornay, Chief, with headquarters in the new Social Security Building, Washington, D. C. Field offices of this service are established in the main and branch offices of the Federal Reserve System throughout the country. This service is charged among other various duties, with expediting the execution of defense contracts in the interest of National Defense by bringing small facilities appropriate for subcontracting in contact with prime contractors. Each regional office of this service will be under a District Coordinator, assisted by a District Manager, with a competent engineering and industrial staff. The unit of this service designated as Sub-Contracting Procedure, in charge of Messrs. Joseph and Francis Trecker, is of particular interest to the Navy Department since this section will encourage all prime contractors throughout the country to make the utmost use of the subcontracting system, and the industrial establishments of the Navy are essentially prime contractors of great importance in the defense effort. Messrs. Trecker have been particularly successful in utilizing a high percentage of subcontractors

in their own large machine tool business in Milwaukee, prior to the organization of the Defense Contract Service, and are making their services available to the government in the interest of expediting National Defense.

2. Reference (a) was issued by this office directing all addressees to make contracts with outside shops for all classes of work assigned to Naval establishments, wherever such action would expedite deliveries and avoid delays in all kinds of Naval work, and was specifically written for the purpose of emphasizing to all addressees the importance of such subcontracting or "farming out", if the Navy is to meet the continually increasing demands that are being made upon it.

3. In furtherance of this policy, complete cooperation will be rendered by the Navy to the purposes of the Defense Contract Service. In order to immediately benefit by the creation of this service, the Department has requested a survey of the several industrial establishments of the Navy with a view to making the utmost practical use of subcontracting. Such surveys will generally be conducted jointly by Mr. Joseph Trecker and a Navy representative from Shore Establishments Division, Bureau of Ships, Bureau of Ordnance, or Bureau of Aeronautics, depending on the character of the Naval plant to be surveyed, together with a representative of the Bureau of Supplies and Accounts. *This survey is in the interest of expediting National Defense*, and every effort must be made to obtain the utmost practical results.

4. In order to centralize the contracts between the Department and the Defense Contract Service, Lieut. Comdr. E. P. A. Simpson, U. S. N. R., of the Office of Chief of Naval Operations (War Procurement Planning Section, Fleet Maintenance Division), is designated as the liaison officer of the Navy Department in its relations with the Defense Contract Service of the Office of Production Management. This officer also functions as the Chief of the Navy section of the Facilities Division, Army and Navy Munitions Board, Room 2826, Munitions Building, thereby providing liaison with such similar efforts as are instituted by the War Department.

5. Reference (b) which directed offices and bureaus to make certain disposition of communications from business concerns and individuals offering their facilities to the Navy in the present emergency, is hereby cancelled. Since the basic purpose of the Defense Contract Service is to procure such facilities for the use of large major contractors, it is directed that in acknowledging such communications, the concern or individual making such an offer be advised to contact the District Coordinator at his local Defense Contract Service office, at the nearest main or branch office of the Federal Reserve Banking System, in order to give such potential subcontractor the best advice available as to his participation in the National Defense Program. The communications, together with copy of reply, will be then forwarded to the Office of Chief of Naval Operations (War Procurement, Planning Section, Fleet Maintenance Division) to be filed with the Army and Navy Munitions Board. This arrangement will permit consolidation and classification of all such information and make it available to both the Navy and War Departments.

(Signed) FORRESTAL, Acting.

CC: Commandants of all Naval Districts (3) ; Each Navy Yard and Station (5).

EXHIBIT No. 79

EXPEDITING NATIONAL DEFENSE—SUBCONTRACTING OR "FARMING OUT" WORK—UTILIZATION OF O. P. M. DEFENSE CONTRACT SERVICE

SOSED-1-EJ
QM/14-3 (33) (410306)

NAVY DEPARTMENT,
WASHINGTON, D. C., March 20, 1941.

From: The Secretary of the Navy.

To: All Bureaus and Offices of the Navy Dept., Commandants of All Naval Districts, Commandants and Commanding Officers of Navy Yards and Naval Stations.

Subject: Expediting National Defense—Subcontracting or "farming out."

Reference: (a) Secnav ltr. SOSED-0-DF: LL/P11-1(390106-11) of 3 December 1940. (b) Secnav ltr. Op.-23M-10-JB; EE-1(3)/P16-3 (410226) Serial 41923 of 26 Feb. 1941.

Enclosure: (A) Copy Contract type "A." (B) Copy Contract type "B." (C) Copy of reference (b).

1. In order to carry out to the greatest extent possible the directive contained in paragraphs 2 and 3 of reference (a), all addresses are directed to make use of the Defense Contract Service covered by reference (b).

2. There are three basic problems in the "farming out" process that affect the Navy:

(a) The location of unused commercial productive capacity, together with a survey of the facilities, capacity, and labor market.

(b) The location and character of work which can be transferred from basic defense contractors to such unobligated plants or facilities.

(c) The means by which available unused facilities may be utilized in the farming out of Naval work to supplement existing Navy Yard capacity.

3. The first phase, namely the location of the unused facilities, is to be handled through the Defense Contract Service. For organization purposes, the twelve Federal Reserve Banks, with their 24 branch offices, will be used as centers for the collection of information regarding unused industrial capacity. In each of these Federal Reserve Banks and branches there will be a District Manager for the Defense Contract service who will be an industrialist, familiar with the industries centered in that locality. He will have a technical staff of engineers acquainted with the various industries in that area, men fully conversant with the capabilities and capacities of industrial concerns in their district, and who will be willing and ready to act in an advisory capacity to give "up to the minute" information as to where facilities desired might be obtained. Under the direction of each Manager a survey will be made of his area and an index made of all the firms, together with their equipment, capacity, and labor market, which can be used for National Defense work. These index lists will be available for reference by any National Defense contractor, Navy Yard, or Arsenal. It is estimated that 60,000 surveys have been made throughout the United States, with 50,000 or 75,000 plants still to be surveyed, not counting the innumerable small plants employing from 1 to 5 mechanics. The Federal Reserve Bank offices were selected as headquarters for this service because they are official governmental agencies, are permanently housed and equipped, and are centrally and prominently located. The Federal Reserve System has permanent headquarters in Washington, D. C., from which directions and controls may be exercised promptly and uniformly, and to which come with great frequency the directing heads of the various Banks and branches for their regular Bank group conferences.

4. Upon inquiry, the Defense Contract Service will be able to furnish Naval Officials with information of plants which have particular types of tools or particular facilities for a type of work, and will be ready to serve in an advisory capacity to further the "farming out" program.

5. For the Navy Yards, the question as to what should be "farmed out" will remain in the hands of the Commandants and Yard Management as they alone can tell whether "farming out" will release Navy tools which can be applied to other work, or whether "farming out" will obviate the necessity of acquiring new Navy tools or facilities. It is not the intention of this plan to "farm out" where the "farming" would render idle either tools now in Navy Yards or employees skilled in their use. All contracts and preliminary negotiations between the Yards and private concerns will be handled by the Navy Yards direct.

6. There are two separate and distinct types of work which require consideration in connection with subcontracting or "farming out":

(a) "Prime manufacturing" work (electrical manufacturing work at the Portsmouth Navy Yard is an example).

(b) Repair or "jobbing work" in the machine or other shops of a Naval Industrial Shore Station.

7. For "prime manufacturing" work the articles are usually covered by specific plans and specifications, and are generally of considerable number whose delivery at a definite time or at a definite rate is predictable. For such work, it is believed that the usual advertised competitive method of bidding under the existing purchasing instructions is normally satisfactory, particularly if free use is made of the procedure covered by Article 1016-2(c) of the Bureau of Supplies, and Accounts Manual, and the time allowed for advertising and for the receipt of bids is reduced to a minimum, and telephonic or other approved form of bids are invited from plants known to have available capacity and facilities to do the work involved. For the second type or "jobbing" material, competitive bidding on a fixed price for the delivered article is more difficult to

obtain expeditiously, and in order to secure deliveries in time, bids will often have to be invited on a contract covering tool rates and labor rates, instead of a price for the finished article. This would apply particularly where the Navy Yard furnishes raw material or available dies, jigs, fixtures, and tools.

8. There are enclosed herewith two types of contracts which may be used for these purposes. Type "A" covers, by means of tool rates and hourly labor rates, the use of facilities of a plant as and when required. Type "A" contracts must, under existing statutes, be forwarded to the Department for execution. Type "B" is what may be termed a "spot contract," and on the basis of a fixed price may be used for individual items of work and executed locally under the provisions of Article 3709 of the Revised Statutes.

9. The procedure proposed is as follows:

From the lists of firms made available by the Defense Contract Service, or from existing locally maintained lists of firms, the Commandant may prepare period contracts of type "A" with firms capable of doing the type of work expected to be required to augment the Yard's own facilities or to release those facilities for other purposes, obtain the signature of the contractor thereon, and forward the documents to the Department for execution. These contracts, when executed, will permit the Yard to draw on the facilities covered when such facilities are needed and available.

10. Prior to the completion of these type "A" contracts, the Commandant may execute and use type "B" to meet the requirements of the Yard. After Type "A" period contracts are completed, he may continue to use the type "B" contract when the facilities covered by the type "A" contracts are not available due to prior obligation at the time required, or to augment the facilities covered by the period contract when the period contract does not cover the type of work required or the amount of work required in the time available.

11. The Commandants of the Navy Yards and establishments have the full authority to determine what work should be contracted for or "farmed out" to meet the necessities of the National Defense in the time available. For "farming out" contracts they may assign regular employees for the inspection and advisory supervision of the work covered by the contracts, or may use the facilities of the Inspectors of Naval Material.

12. Everything in connection with National Defense must be prosecuted to the utmost using all available Government and commercial facilities.

13. Under Section 3709 of the Revised Statutes, the Commandant has full authority, when immediate delivery or performance is required by the public exigency, to procure articles or services by open purchase or contract, at the places and in the manner in which such articles are usually bought or sold, or such services engaged between individuals. During the present emergency, whenever the Commandant finds that the conservation of facilities and/or the essential time element of National Defense can best be furthered by "farming out" of work normally done in Navy Yards, thus releasing machine tools or men for other defense work, such "farming out" work *shall be considered as emergency work* and (under Article 3709 of the Revised Statutes), contracts for such work made locally in advance of the Department's approval.

(Signed) JAMES FORRESTAL,
Acting.

Department distribution: IV, V (a), (b), (c), (d), IX (a).

EXHIBIT No. 80

UTILIZATION OF O. P. M. DEFENSE CONTRACT SERVICE

NAVY DEPARTMENT,
Washington, April 8, 1941.

On-23M-5-JB
QM/L4-3(33) (410408)
Serial 86723

From: Secretary of the Navy.

To: Commandants of all Naval Districts.

All Bureaus and Offices, Navy Department.

Subject: Navy Department Participation in Objectives of Defense Contract Service, Office of Production Management.

Reference: (a) SecNav ltr. Op-23M-10-JB; EE-1(3)/P16-3 (410226) Serial 41923 of 26 Feb. 1941. (b) Ltr. SOSED-1-EJ, QM/14-3(33) (410306) of 20 March 1941.

Enclosure: (A) Copy of Reference (a). (B) Copy of Reference (b) without enclosures.

1. Reference (a) furnished information relative to the establishment of the Defense Contract Service of the Office of Production Management, and the participation of the Naval Service therein.

2. Reference (b) prescribed the procedure to be followed in subcontracting by the Navy Yards to commercial firms, and outlined the assistance that might be rendered by the District Offices of the Defense Contract Service of the Office of Production Management.

3. Under the direction of the Office of Production Management the services and information available in the District Offices of the Defense Contract Service are to be applied to the problem of expediting defense contracts under execution by commercial firms through the utilization of the subcontracting procedure. It is therefore directed that District Commandants and the organization of the Naval Inspection Service cooperate with the District Coordinators of the Defense Contract Service through liaison and the furnishing upon request of pertinent information available. This will require coordinated procedure on the part of the Navy, which will be provided through the initiative of the District Commandants and Inspectors of Naval Material, as the case may be.

4. While the activities of the District Offices of the Defense Contract Service are presently applied to the problem of subcontracting, it is anticipated that their functions will extend into a broader field of effort.

5. It is contemplated that exchange of information and the development of an advisory service as between District Commandants, Inspectors of Naval Material, and District Coordinators of the Defense Contract Service will be fully developed in order that mutual advantages may accrue.

6. It is directed the Bureaus and offices of the Navy Department issue instructions from time to time, as necessary, to effect the purposes herein outlined.

(Signed) RALPH A. BARO.
Acting Secretary of the Navy.

CC: Mr. Mehornay, O. P. M., General Inspector BuShips.

EXHIBIT 81

CONTRACTORS' PREFERENCE LIST FOR MACHINE TOOLS—UTILIZATION OF IDLE MACHINE TOOLS

NAVY DEPARTMENT,
Washington, May 26, 1941.

In reply, refer to initials and no. JJ40/L8-3 (401223) SOSED-5g-1hp.

From: The Assistant Secretary of the Navy.

To: Bureaus and Offices of the Navy Department.

Director, Naval Research Laboratory.

Commandants of Naval Districts.

Commandant, Navy Yard, Washington, D. C.

Inspectors of Naval Material.

Resident Inspectors of Naval Material.

Inspectors of Ordnance.

Supervisors of Shipbuilding.

Inspectors of Machinery.

Army and Navy Munitions Board, Priorities Committee.

Army and Navy Munitions Board, Tool Liaison Section.

Subject: Machine Tool Lists, Critical Tools, Standard Procedure.

Reference: (a) Assistant Secretary of the Navy letter JJ40/L8-3(401223) SOSED-5g-1 hp dated April 10, 1941, Machine Tool Deliveries, Delays in.

Enclosures (Under separate cover): (A) Navy Department Contractors' Order of Preference List. (CONFIDENTIAL). (Herewith): (B) Form No. 496. (Herewith): (C) Machine Tool Lists, Description of Items.

1. In order to clarify the existing regulations established by the joint action of the Office of Production Management, the Secretary of War, and the Secretary of the Navy, the following information is furnished for your guidance.

2. As a result of conference and agreement by the Bureaus of the Navy Department, there has been established a Navy Department Contractors' Order of Preference List for machine tool requirements arranged in numerical order of importance in the National Defense Effort, and there will shortly be established a similar Master Contractors' Order of Preference List for the Navy, Army, and Air Corps. (Machine tool requirements of the Bureau of Aeronautics' Contractors are combined with those of the Army Air Corps and are being handled by the Procurement Section, Office of Production Management, at Wright Field, Dayton, Ohio).

3. All contractors producing materials for one ELEMENT are placed in one GROUP; for instance, one particular GROUP comprises about thirty-five contractors who produce guns, mounts, fire control and ammunition for automatic antiaircraft. All tools required by the contractors in this GROUP will be supplied them in advance of and, if necessary, at the expense of contractors in a lower GROUP having similar tools on order; however, diversions of tools from contractors in a lower GROUP to contractors in a higher GROUP will be made only in the interest of the National Defense and only after consultation with the Bureau affected.

4. It is apparent that large contractors will be found in more than one GROUP and it is essential that the tool lists for such contractors be carefully segregated so that only tools required for the one GROUP are shown in that tool list.

5. The Field Inspection Force will obtain from each contractor on the attached list, Enclosure (A)—

A *Pilot* list of machine tools the contractor needs to begin his particular effort, and later an *Additional* list to start the contractor in production.

(Where such lists have been supplied already by the Contractor, either to the Bureaus direct or through the Inspector, the above subparagraph will be disregarded.)

Thereafter, a *monthly* list—the *First monthly* list to be arranged in this sequence:

(a) A report of tools delivered or canceled on the *Pilot* list.

(b) A report of tools delivered or canceled on the *Additional* list.

(c) *First Monthly Additional* list of tools which the contractor's expanding program now shows to be needed.

The *Second Monthly* list to be a duplicate of the *first monthly* list (omitting those tools shown delivered or cancelled on the *first monthly* list) to be arranged in this sequence:

(a) A report of tools delivered or cancelled on the *Pilot* list.

(b) A report of tools delivered or cancelled on the *additional* list.

(c) A report of tools delivered or cancelled on the *First Monthly Additional* List.

(d) *Second Monthly Additional* list of tools which the contractor's expanding program now shows to be needed since the *First Monthly Additional* list was submitted.

The *Third* (and succeeding) *monthly* lists to be made out in the same form as the *second monthly* list.

When all the tools on the *Pilot* list, the *Additional* list, etc. have been delivered or cancelled, any reference to these lists will be omitted from the *Monthly* list.

6. All machine tool lists must be forwarded by the Inspector direct to the Bureau having primary interest and shall be submitted in triplicate on Form No. 496, copy attached, Enclosure (B). As Form 496 was originally prepared for the Air Corps, any instructions on the back which are not required by or are in conflict with this letter may be disregarded. All columns must be filled in, especially the Order No. and Date. It is essential that the Field Inspection Force check carefully the "Date Required" to assure that this date is the date when the tool can actually be put to use. Every day is extremely important, and under no circumstances should the "Date Required" be in advance of the date that the tool can be put into immediate use.

7. Where a production line of a contractor is any GROUP is held up, due to the need of one or more *Critical* tools, these tools should be made the subject of a separate report to the Bureau having cognizance pointing out the importance of the tool or tools and giving all the details called for on Form No. 496. The Bureau having cognizance, for instance the Bureau of Ordnance, will then

attempt to obtain the tool or tools without loss of efficiency from similar tools on order for another Bureau of Ordnance contractor, or if this is not possible, will attempt to make a diversion from tools for a Bureau of Ships contractor.

(A special form called the Filter Form will be used for this purpose.)

If no tools are available in either the Bureau of Ordnance or the Bureau of Ships, the Filter Form will be forwarded to the Office of the Assistant Secretary of the Navy, Shore Establishments Division. That Office, if possible, will obtain these tools from the Army, Navy, and Navy Yard Pools; the Filter Form will then be forwarded to the Army and Navy Munitions Board, Tool Liaison Section, Office of Production Management, where, if necessary, these tools will be diverted from some contractor of lesser importance in the National Defense Effort or from the British Purchasing Commission or from other foreign account.

8. It is a duty of the highest importance for each individual Inspector to see that there are no idle machine tools. Where such tools are found, Inspectors are authorized to confer with the other Inspectors in their vicinity to see whether or not such tools cannot be put to use immediately in another plant until such time as his own plant may need them. In every case where the Inspector finds that a machine tool will not be used within a period longer than one week after its arrival and cannot be put to use in a nearby plant, the Inspector will report the facts by dispatch to the Bureau having cognizance for further action.

9. Whenever the Inspector becomes aware that the actual delivery of any tool threatens to fall behind the promised delivery, he shall make an immediate report to the Bureau concerned fully identifying the tool (including No. of page and date of the Machine Tool List on which it appears) stating the reason for the delay (diversion to another, named, contractor, etc.) and stating the adverse effect that will result from this delayed delivery—"Diversion will reduce scheduled production by 15%," etc.

10. Finally: An inspection of Machine Tool Lists already submitted discloses the fact that, in many instances, tools are not fully described so that efforts to obtain earlier deliveries result in needless correspondence, telegrams, telephone conversations, visits by Contractors' Representatives to machine tool builders, etc., all resulting in loss of irreplaceable time. Full information must be entered in the column "Description of Item." The importance of "Model Numbers," "Work Capacity," and such designations as "Hydraulic" cannot be overemphasized as a means of identification. Enclosure (C) gives fuller details in this respect.

(Signed) RALPH A. BARD.

Copy: Tools Section, Mr. Mason Britton, Office of Production Management.

INSTRUCTIONS AND EXPLANATORY NOTES

The form "Critical or Total ——— Requirements for Defense Program" should be used to report critical or total requirements on machine tools, and may be used to report, for priority action, individual items of equipment or material shortages.

Critical report should include those items which are necessary to meet the desired immediate production schedule.

Total report should include critical items, noncritical items on order, and future expectancies based on present aircraft orders.

Shortages of items should include items on which delivery is either defaulted, or delivery date set back due to diversion of item, or due to increase in delivery rate, or failure of subcontractor to deliver, etc. An explanation of the cause of the shortages should accompany the report.

Arrange the report alphabetically by manufacturer or equipment or material.

NAME: Indicate the name of the company submitting the report.

ADDRESS: Indicate the complete address, giving street, city, and state of company submitting report.

PRIMARY ITEM PRODUCED: Indicate the main items under contract.

CONTRACT: Indicate the order or contract number.

FOR WHOM PRODUCED: Indicate under this heading the name of the customer, such as Army, Navy, British, etc., for whom item is being produced.

MANUFACTURER OR VENDOR: Indicate first the manufacturer or producer of the item or material. Beneath the manufacturer's name indicate the name of the vendor or dealer, if applicable.

ORDER NUMBER: Indicate in this column the order number of both manufacturer and vendor.

DESCRIPTION OF ITEM ON ORDER: Give a complete description of the item on order including size, capacity, and manufacturer's catalogue designation. If it is a special material or machine tool, indicate the word "Special."

TOTAL: Indicate in this column the total quantity required.

R: Indicate in line "R" in the proper monthly column the quantity required.

P: Indicate in line "P" in the proper monthly column the quantity promised.

Report each month thereafter the changes affecting this report, including addition, cancellations, completed orders, changes in either required or promised delivery periods, and defaulted deliveries. In reporting defaulted deliveries include such information as is available pertaining to the reason for defaulted deliveries. A new report each month is not desired, and corrections in your report will be accomplished by this office.

ENCLOSURE C

MACHINE TOOL LISTS

DESCRIPTION OF ITEM

MILLING MACHINES: There are many types and sizes of Milling Machines. Therefore, it is essential that the *Manufacturer's Trade Name* and *Model Number* be given. In addition, the nominal work capacity or dimensional size should be given if possible.

Examples.—No. 2 KM, Kearney & Trecker Horizontal, Universal Milling Machine. No. 2, High Speed, Cincinnati Horizontal Universal Milling Machine. (Dial Type). No. 2 KM and No. 2 are Model Numbers.

GRINDERS: There are many types and sizes of Grinders and, therefore, it is essential to furnish the *Manufacturer's* or *Trade Name* and *Model Number*. However, dimensional work capacities are sometimes used in lieu of Model Numbers.

Examples.—10" x 24" Landis Type C, Hydraulic Universal Cylindrical Grinder: 10" is the nominal swing; 24" is the nominal distance between work centers; "Universal" indicates a swiveling head stock and Grinding Wheel Head. No. 16, 28" Bryant Hydraulic Internal Grinder: No. 16 is the Model Number; 28" is the nominal swing. 16" x 16" x 120" Thompson Type C Horizontal Surface Grinder. No. 400 Series, 18" x 18" x 220" Hanchett Vertical Spindle Surface Grinder. Model C-12" Arter Hydraulic Rotary Surface Grinder. (16" x 16" x 120") and

(18" x 18" x 220") are work capacities. Horizontal and Vertical refer to the position of the spindle.

LATHES: Lathes should be identified by the *Manufacturer's* or *Trade Name*; the *Model Number* if used and the nominal work capacity. Lathes of a given "Swing" are available in various lengths, so the nominal length should be indicated.

Examples.—14" x 30" American "Pacemaker" Lathe; 14" is the nominal swing; 30" is the distance between work centers with tailstock flush.

DRILLING MACHINES: There are many types and sizes of Drilling Machines. They should be identified by *Manufacturer's* or *Trade Name*, *Model Number* and *Size*.

Examples.—No. S-201 Barnes Self-Oiling All Geared Drilling & Tapping Machine. No. S-201 is the Model Number. 21" Bickford All Geared Round Column Upright Drill. 21" is the Nominal Swing. 6' x 19" Carlton Radial Drill. 6' is the swing. 19" is the diameter of the column.

SHAPERS: Shapers are usually horizontal machines although there are some vertical machines (slotters). A Shaper is usually identified by *Manufacturer's* or *Trade Name* and a *Size Figure* which is the nominal length of the stroke.

Example.—16" Gould & Eberhardt Plain Tool Room Shaper. 16" is the nominal stroke of the ram.

PLANERS: Planers are usually of two types. The Double Housing Models, having the cross rail supported at both ends and the Openside which has only one support. Planers are identified by *Manufacturer's* or *Trade Name* and by *Size* (3 Dimensions) indicating the maximum work capacity. These machines are available with one to four heads and this should be indicated. Rail Heads are mounted on Cross Rail. Side Heads are mounted on Housing.

Examples.—30" x 30" x 3' Gray Double Housing Planer with 2 Rail Heads and 2 Side Heads: 30" is the maximum width of work; 30" is the maximum height of work; 8' is the maximum travel of table. 48" x 60" x 12' Cincinnati Hypro Openside Planer with 2 Rail Heads and 1 Side Head: 48" is the maximum width of work; 60" is the maximum height of work; 12' is the maximum travel of table.

TURRET LATHES: Turret Lathes are made in both vertical and horizontal models. They are identified by *Manufacturer's* or *Trade Name* and either *Model Numbers* or *Size*. The horizontal machines are of two types, the Ram Type and the Saddle Type which has reference to the turret mounting. The horizontal machines can be either bar or chucking type.

Examples.—No. 3 Jones & Lamson Ram Type Universal Turret Lathe. 30" Bullard "Cut Master" Vertical Turret Lathe: 30" is the nominal swing.

VERTICAL BORING MILL: They are identified by *Manufacturer's* or *Trade Name* and by work capacity. They can have: 2 cutting heads on cross rail; 2 cutting heads on cross rail, 1 side cutting head; 1 cutting head on cross rail, 2 side cutting heads.

Examples.—100" Consolidated Vertical Boring Mill, 2 heads on cross rail, 1 side head.

BORING, DRILLING & MILLING MACHINES: These machines are designed to do all three operations. They are either Table or Floor Type. They are identified by *Manufacturer's* or *Trade Name*, and either *Model Number* or *Size*. Great care should be taken in describing these machines as many features are special. Table dimensions and travel should be given if possible.

Examples.—No. 350 (5" spindle) (auxiliary 2" spindle) Giddings & Lewis, Table Type Horizontal Boring, Drilling & Milling Machine, 30" x 60" Table, stroke 30", vertical travel 3', horizontal travel 6'.

SPECIAL MACHINES: Describe Special Machines by *Type*, *Size*, *Function*, and *Manufacturer*.

EXHIBIT No. 82

LIST OF REGIONAL OFFICES VISITED TO CALL ATTENTION TO AND EXPLAIN SOURCES OF PERTINENT INFORMATION FORTHCOMING FROM NAVY DEPARTMENT IN CONNECTION WITH DEFENSE CONTRACT SERVICE

In reply refer to initials
and No.

Op-23M JB

NAVY DEPARTMENT,
OFFICE OF THE CHIEF OF NAVAL OPERATIONS,
Washington, 12 June 1941.

Memorandum to: Mr. Dulles.

To aid in the organization of the Defense Contract Service, Lt. Comdr. Simpson, Op-23M, visited per the attached list, the regional offices on the dates indicated. The purpose of such visits was to call attention and explain the many sources of pertinent information available and forthcoming from Navy Department, and further to familiarize such offices with the use of this material and data in the furtherance of the Defense Contract Service.

A. B. ANDERSON,
Captain, U. S. N.

Att.

DEFENSE CONTROL SERVICE OFFICES VISITED BY LT. COMDR. E. P. A. SIMPSON

DEFENSE CONTRACT SERVICE

Location :	Dates visited
Atlanta, Ga.....	May 12; March 20.
Birmingham, Ala.....	April 21.
Boston, Mass.....	April 18.
Chicago, Ill.....	May 26; April 1; March 18-19.
Cleveland, Ohio.....	May 18.
Denver, Colo.....	June 10-14.
Detroit, Mich.....	April 2.
Helena, Mont.....	May 30.
Jacksonville, Fla.....	May 14.
Kansas City, Mo.....	June 10-14.
Los Angeles, Calif.....	June 3-9.
Memphis, Tenn.....	May 16.
Minneapolis, Minn.....	May 27.
Nashville, Tenn.....	May 13; March 17.
New Orleans, La.....	May 15; March 14-16.
Newport News, Va.....	Feb. 20.
New York City.....	May 7.
Philadelphia, Pa.....	May 8.
Portland, Oreg.....	June 3-9.
Salt Lake City, Utah.....	June 9.
San Antonio, Tex.....	March 13.
San Francisco, Calif.....	June 3-9.
St. Louis, Mo.....	June 10-14.
Seattle, Wash.....	May 31; June 2.

EXHIBIT No. 83 appears in Hearings, Part 3

EXHIBIT No. 84, entered in the record during executive session, is on file with the committee

EXHIBIT No. 85

Navy cost-plus-fixed-fee contracts

[Prepared from data received from the Navy Department and from information received from the companies listed]

Name	Fee	Possible bonus	Fee plus possible bonus	New facilities financed by United States	Net worth Dec. 31, 1939	Average net profits 1936-40
1. Associated Shipbuilders, Seattle, Wash.-----	\$960,000.00	\$160,000	\$1,120,000.00	\$700,000	¹ \$254,094.37	¹ \$224,094.37
2. Consolidated Steel Corporation, Orange, Tex.-----	4,922,292.00	820,380	5,742,672.00	5,367,400	4,283,447.74	409,970.92
3. Cramp Shipbuilding Co., Philadelphia, Pa.-----	6,378,480.00	1,063,800	7,442,280.00	12,000,000	² 4,442,937.79	(²)
4. Federal Shipbuilding & Drydock Co., Philadelphia, Pa.-----	³ 1,090,000.00	None	1,090,000.00	5,500,000	2,744,519.68	1,332,479.41
5. Gulf Shipbuilding Corporation, Mobile, Ala.-----	7,509,564.00	273,460	7,783,024.00	3,700,000	⁴ 2,000,000.00	⁴ 9,205.57
6. Lake Washington Shipyards, ⁵ Houston, Wash.-----	1,440,000.00	240,000	1,680,000.00	280,000	88,935.00	29,691.60
7. Los Angeles Shipbuilding & Drydock Co., San Pedro, Calif.-----	4,677,000.00	799,500	5,456,000.00	1,185,000	1,080,000.00	⁶ 93,750.00
8. Manitowoc Shipbuilding & Drydock Co., Manitowoc, Wis.-----	1,710,000.00	285,000	1,995,000.00	1,290,000	2,292,196.83	33,175.73
9. Moore Drydock Co., Oakland, Calif.-----	2,130,000.00	355,000	2,485,000.00	1,600,000	2,531,433.12	210,027.90
10. Henry D. Nevins Inc., City Island, N. Y.-----	202,193.20	None	202,193.20	100,000	⁷ 230,504.70	2,346.29
11. Seattle-Tacoma Shipbuilding Co., Seattle, Wash.-----	10,050,765.00	1,675,125	11,725,890.00	5,800,000	⁸ 3,530,073.19	⁸ 480,073.19
12. Tampa Shipbuilding & Engine Co., Tampa, Fla.-----	2,277,000.00	379,500	2,656,500.00	238,000	⁹ 388,714.70	⁹ ¹⁰ 42,731.86
13. Willamette Iron & Steel Corporation, Portland, Oreg.-----	1,440,000.00	240,000	1,680,000.00	616,800	712,872.71	21,874.29

¹ Associated Shipbuilders is a joint venture consisting of Puget Sound Bridge & Dredging Co., a corporation of Seattle, Wash., and Lake Union Drydock & Machine Works, also a Seattle, Wash., corporation. The joint venture is dated Sept. 19, 1940. Net worth here listed is as at Dec. 31, 1940. The net profit here listed is for the period from Sept. 19 to Dec. 31, 1940.

² Cramp Shipbuilding Co. was incorporated on July 16, 1940, as a successor to William Cramp & Sons Ship & Engine Co., which discontinued shipbuilding operations in 1927. The net worth here given is as at Dec. 31, 1940. The Cramp Shipbuilding Co. has not yet prepared income statements since operations consisting primarily of the rehabilitation of the shipyard commenced only on Nov. 1, 1940, and there have as yet been no earnings.

³ Federal has, in addition, fixed-price contracts for 34 destroyers and 3 light cruisers. [NOTE.—2 cost-plus-fixed-fee contracts for the construction of 4 destroyers were canceled as of Feb. 10, 1941, and fixed-price contracts were awarded to this company instead.]

⁴ The Gulf Shipbuilding Corporation was formed as a wholly owned subsidiary of the Waterman Steamship Corporation to engage in the construction and repair of vessels, principally with a view to the construction of replacement vessels for the Waterman Steamship Corporation's fleet, and having purchased the shipyard of the Chickasaw Shipbuilding & Car Co. in November 1938, was proceeding with the rehabilitation of the yard, but had not actually engaged upon the construction of vessels, so that a financial statement for the last 5 years is not available. The figure of \$2,000,000 is the net worth as of the present date; \$9,205.57 is the total net profit earned to this date.

⁵ Lake Washington Shipyards has in addition fixed-price contracts for construction of 4 net tenders.

⁶ The Los Angeles Shipbuilding & Drydock Corporation was incorporated in May 1938, in connection with a reorganization under sec. 77B of the Los Angeles Lumber Products Co., Ltd.; these reorganization proceedings are still pending. The business now operated by the company was formerly operated by the Los Angeles Lumber Products Co. and its subsidiaries. The figure of \$93,750 represents the average net profits of Los Angeles Shipbuilding & Drydock Corporation for the years 1937 to 1940.

⁷ Net worth as at Aug. 31, 1939.

⁸ The Seattle-Tacoma Co. was organized July 1939 by Todd Shipyards, New York. Net worth is as at Nov. 30, 1940. Net profit here listed is for the year ended Nov. 30, 1940.

⁹ Figures are for Tampa Shipbuilding & Engineering Co., which went out of business Nov. 14, 1940, due to insolvency and was succeeded by the Tampa Shipbuilding & Engine Corporation as a result of the reorganization of the old company and new financing by R. F. C. Net worth here given is as at June 30, 1940. There was an average net deficit of \$42,731.86 for the 5-year period.

¹⁰ Red figures.

SUPPLEMENTAL DATA

The following table appears at this point in connection with the testimony of Admiral S. M. Robinson, *supra*, p. 1419.

TABLE I.—*Table showing expansion of navy-yard facilities through Bureau of Ships from July 1, 1940, to July 1, 1941*

NAVY YARD, PORTSMOUTH, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$4, 150, 000	
2. Collateral and installation, machine tools-----	533, 000	
		\$4, 683, 000
3. Relocation of cafeteria-----	60, 000	
4. Temporary storehouse facilities-----	125, 000	
5. Bridge access to mainland-----	300, 000	
6. Transportation and construction equipment-----	35, 000	
7. Power and utilities-----	487, 500	
8. Core borings, proposed docking and berthing facilities-----	15, 000	
9. Improvements of water system-----	85, 000	
10. Covered barges for outfitting-----	160, 000	
11. Shipbuilding drydock including all necessary weight-handling facilities and accessories-----	3, 000, 000	
12. Miscellaneous, commandants' discretion-----	785, 000	
13. Contingencies, including overtime and shift work---	200, 000	
14. Security-----	100, 000	
		5, 352, 500
Total to date-----		10, 035, 500

NAVY YARD, BOSTON, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$3, 040, 000	
2. Collateral and installation of machine tools-----	630, 000	
		\$3, 670, 000
3. Construction, new shipways-----	750, 000	
4. Extend pier 4-A and crane-----	1, 275, 000	
5. Weight-handling equipment-----	297, 500	
6. Temporary storehouse facilities-----	110, 000	
7. Extend piers 4 and 5-----	400, 000	
8. Extend shops to release building 106 for heavy-material storage-----	200, 000	
9. Open storage on improved water front-----	450, 000	
10. Rubbish disposal, including new lighter-----	150, 000	
11. Fire protection-----	100, 000	
12. First-aid stations-----	30, 000	
13. Railroad replacement and improvements-----	52, 500	
14. South Boston development-----	3, 000, 000	
15. Additional shipway facilities-----	100, 000	
16. Permanent storehouse-----	700, 000	
17. Miscellaneous, commandant's discretion-----	940, 000	
18. Contingencies, including overtime and shift work---	300, 000	
19. Security of yard-----	150, 000	
		9, 095, 000
Total to date-----		12, 765, 000

NAVY YARD, NEW YORK, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$6, 261, 000	
2. Collateral costs and installation of machine tools---	1, 815, 000	
		\$8, 076, 000
3. Extension structural shop-----	680, 000	
4. Dredging berths 11, 12, 13-----	50, 000	

TABLE I.—Table showing expansion of navy-yard facilities through Bureau of Ships from July 1, 1940, to July 1, 1941—Continued

NAVY YARD, NEW YORK, SHIPBUILDING FACILITIES, PROJECT ORDERS—continued

5. Replacement foundry-----	\$1, 460, 000	
6. Improvement utilities and services-----	630, 000	
7. Transportation equipment-----	300, 000	
8. Temporary storehouses-----	300, 000	
9. Cafeteria, including food distribution system-----	200, 000	
10. First-aid stations (dispensary)-----	35, 000	
11. Utility building (causeway)-----	250, 000	
12. Replace present power building-----	4, 000, 000	
13. Purchase of land, clearing, construction of 2 destroyer building docks complete with services, accessories, subassembly, necessary buildings, roads, accesses, etc-----	42, 350, 000	
14. General storehouse-----	1, 800, 000	
15. Modification of building ways No. 1-----	202, 000	
16. Project No. 1 subassembly shop and facilities-----	465, 000	
17. Materials test laboratory-----	3, 000, 000	
18. Development of Wallabout tract-----	3, 500, 000	
19. Miscellaneous, commandant's discretion-----	1, 400, 000	
20. Contingency, including overtime and shift work-----	300, 000	
21. Security-----	100, 000	
		\$61, 022, 000
Total to date-----		69, 098, 000

NAVY YARD, PHILADELPHIA, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$5, 310, 000	
2. Collateral costs and installation machine tools-----	1, 797, 070	
		\$7, 107, 070
3. Bridge over basin-----	1, 250, 000	
4. Cranes-----	475, 000	
5. Turret slab-----	150, 000	
6. Structural assembly shop (complete)-----	75, 000	
7. Building No. 22 (reconstruct)-----	100, 000	
8. Pier No. 6-----	1, 185, 000	
9. Pattern shop-----	525, 000	
10. Office building (commandant)-----	300, 000	
11. Transportation equipment-----	100, 000	
12. Power plant improvements, services, and utilities-----	2, 000, 000	
13. Assembly shop, floor and slab-----	240, 000	
14. Removal and relocation of strategic ore-----	36, 000	
15. Service building-----	140, 000	
16. Building No. 177 (shipwrights) extend-----	25, 000	
17. 25-ton floating derrick-----	200, 000	
18. Building No. 15 (riggers) improve-----	25, 000	
19. Storehouse reserve basin-----	800, 000	
20. Cafeteria, including food distribution system-----	100, 000	
21. Battery storehouse and quay wall-----	600, 000	
22. Destroyer building dock No. 5, complete with service and accessories, including quay walls-----	15, 000, 000	
23. New pier, including accessories-----	970, 000	
24. Quay walls, vicinity of building dock and paving to serve building docks-----	2, 000, 000	
25. Storehouse, 8 stories-----	3, 530, 000	
26. Extend crane tracks, pier 2-----	20, 000	
27. Complete improvements of reserve basin-----	375, 000	
28. 20-ton drydock crane-----	113, 000	
29. Turbine testing laboratory-----	2, 000, 000	
30. Shipbuilding drydock No. 4, funds to complete-----	6, 300, 000	
31. Service building, pier D-----	375, 000	
32. Battery charging and high power air line-----	35, 000	
33. Marine railway-----	1, 100, 000	

TABLE I.—Table showing expansion of navy-yard facilities through Bureau of Ships from July 1, 1940, to July 1, 1941—Continued

NAVY YARD, PHILADELPHIA, SHIPBUILDING FACILITIES, PROJECT ORDERS—continued

34. Crane for marine railway-----	\$125, 000	
35. Retaining wall-----	325, 000	
36. Pier E-----	400, 000	
37. Widening Broad and 2d Sts-----	100, 000	
38. Miscellaneous, commandant's discretion-----	1, 585, 000	
39. Contingency, including overtime and shift work-----	300, 000	
40. Security-----	155, 000	
		\$43, 184, 000
Total to date-----		50, 291, 070

NAVY YARD, NORFOLK, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$6, 900, 000	
2. Collateral and installation machine tools-----	1, 093, 000	
		\$7, 993, 000
3. Pier 5 crane-----	150, 000	
4. Extend battleship storehouse-----	125, 000	
5. Transportation and weight handling-----	300, 000	
6. Services and utilities, south end-----	1, 500, 000	
7. Power plant improvements-----	600, 000	
8. Varnish and plastic plant-----	136, 000	
9. Quay walls, including crane and purchase of land-----	1, 500, 000	
10. Rearrange steel yard, including new cranes-----	300, 000	
11. Ordnance storehouse (temporary)-----	130, 000	
12. Material assembly building-----	900, 000	
13. Subassembly facilities, additional-----	500, 000	
14. Electrical shop, extend-----	220, 000	
15. Dispensary and first-aid stations-----	200, 000	
16. Turret shop extension-----	214, 000	
17. Quay walls, including purchase of land and dredg- ing, north end-----	650, 000	
18. Tool rooms and offices (portable)-----	60, 000	
19. Gas plant, replacement-----	150, 000	
20. New storehouse, permanent multistory-----	2, 500, 000	
21. Additional drydock crane-----	180, 000	
22. Floating crane, 25-ton-----	150, 000	
23. Shipbuilding drydock No. 8, funds to complete-----	8, 700, 000	
24. Miscellaneous, commandant's discretion-----	1, 400, 000	
25. Contingency, including overtime and shift wordk-----	300, 000	
26. Security-----	100, 000	
		20, 965, 000
Total to date-----		28, 958, 000

NAVY YARD, CHARLESTON, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization-----	\$2, 480, 000	
2. Collateral and installation, machine tools-----	398, 000	
		\$2, 878, 000
3. Crane runway for shipbuilding ways-----	85, 100	
4. Fire fighting, including apparatus-----	200, 000	
5. Utilities and service systems, electric-----	432, 000	
6. Power plant boiler and system distribution system-----	195, 000	
7. Extension to building 55-----	80, 000	
8. Temporary storehouse-----	100, 000	
9. Cafeteria and food distribution-----	75, 000	
10. Pier 352, extend-----	380, 000	
11. Pier 314, extend-----	305, 000	
12. Pier 317B, extend-----	615, 000	
13. Gas plant, relocate-----	75, 000	
14. SF shop activities, extend-----	450, 000	
15. Machine shop-----	60, 000	
16. Paint and oil storehouse-----	50, 000	

TABLE I.—Table showing expansion of navy-yard facilities through Bureau of Ships from July 1, 1940, to July 1, 1941—Continued

NAVY YARD, CHARLESTON, SHIPBUILDING FACILITIES, PROJECT ORDERS—continued

17. Production office apprentice school-----	\$100,000	
18. Central tool shop-----	85,000	
19. Transportation building, extend-----	100,000	
20. Building 6, alter-----	45,000	
21. Transportation and weight handling-----	125,000	
22. Waterfront, improve for assembly-----	50,000	
23. Heavy material storehouse and accessories-----	230,000	
24. Double destroyer shipbuilding dock including all necessary weight handling and accessories-----	3,000,000	
25. Replacement operating quay wall-----	500,000	
26. Expansion of sheet metal shop-----	50,000	
27. Labor board and P. O. building-----	275,000	
28. Miscellaneous, commandant's discretion-----	785,000	
29. Contingencies including overtime and shift work---	200,000	
30. Items essential to safeguard security of yard-----	100,000	
		\$8,747,100
Total to date-----		11,625,100

NAVY YARD, MARE ISLAND, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine-tool authorization-----	\$4,710,000	
2. Collateral and installation machine tools-----	1,214,000	
		\$5,924,000
3. Construction berthing piers and accessories-----	3,500,000	
4. Submarine wharf, fill and bulkhead-----	200,000	
5. Submarine base, services and utilities-----	400,000	
6. Electrical shop (complete)-----	75,000	
7. Power-plant improvements-----	250,000	
8. SF shop, hydraulic plant-----	50,000	
9. Temporary storehouses-----	200,000	
10. Quay wall, drydocks 2 and 3-----	450,000	
11. Cafeteria and food-distribution system-----	250,000	
12. Electro-plating shop-----	50,000	
13. Locomotive cranes for new piers-----	200,000	
14. Office equipment-----	50,000	
15. Boat storage (new construction)-----	125,000	
16. Apprentice school-----	125,000	
17. New piers, 4 service buildings-----	300,000	
18. Outside power connections-----	500,000	
19. Rearrangement of shops-----	50,000	
20. Cranes for new pier development-----	430,000	
21. Central power plant improvements-----	750,000	
22. Paving, south end-----	200,000	
23. Shop and yard lighting improvements-----	200,000	
24. Transportation building and equipment-----	235,000	
25. Move chemical laboratory into building 101 or medical supply building 229 (1st available)-----	40,000	
26. Locomotives-----	60,000	
27. Double submarine building ways, including all neces- sary accessories-----	500,000	
28. Relocation lumber storage-----	140,000	
29. Gate and personnel building-----	125,000	
30. Pier development-----	1,200,000	
31. SF to complete administration, subassembly, elec- trical and steam test buildings-----	250,000	
32. Miscellaneous, commandant's discretion-----	1,700,000	
33. Contingencies, including overtime and shift work---	340,000	
34. Security-----	200,000	
		13,145,000
Total to date-----		19,069,000

TABLE I.—*Table showing expansion of navy-yard facilities through Bureau of Ships from July 1, 1940, to July 1, 1941—Continued*

NAVY YARD, PUGET SOUND, SHIPBUILDING FACILITIES, PROJECT ORDERS

1. Machine tool authorization.....	\$4, 870, 000	
2. Collateral and installation machine tools.....	950, 000	
		\$5, 820, 000
3. Construction of additional pier.....	600, 000	
4. Extension to building 450 and construction of temporary storage building.....	522, 000	
5. Additions to power facilities.....	820, 900	
6. Extension power facilities.....	1, 000, 000	
7. Fitting-out pier.....	1, 320, 000	
8. SF shop, fabricating bays.....	1, 600, 000	
9. Machine shop, extend.....	300, 000	
10. Extend building 367 for boat and boat lumber storage.....	117, 500	
11. Veer storage racks in building 450, extension to.....	25, 000	
12. Radio and sound laboratory (new).....	230, 000	
13. Temporary storehouse.....	120, 000	
14. Improvement of water front, west end of navy yard.....	825, 000	
15. Cranes.....	342, 000	
16. Miscellaneous, commandant's discretion.....	1, 400, 000	
17. Contingencies, including overtime and shift work.....	200, 000	
18. Security.....	100, 000	
19. Relocation of salvage building and incinerator.....	110, 000	
		9, 632, 400
Total to date.....		15, 452, 400

The following table appears herewith in connection with the testimony of Admiral S. M. Robinson, *supra*, p. 1436:

TABLE II.—*Shipbuilding facilities expansion summary as of July 8, 1941*

	Buildings, structures, piers, land, etc.	Shipways and shipbuilding docks	Utilities	Equipment	Total
Navy yards.....	¹ \$80, 588, 414. 00	¹ \$79, 902, 000	¹ \$14, 384, 500	\$48, 741, 070	\$223, 615, 984. 00
Private shipyards.....	43, 066, 855. 78	48, 094, 450	23, 767, 400	26, 332, 600	141, 261, 305. 78
General industry (manufacturing plants).....	24, 570, 425. 40		11, 955, 915	63, 684, 891	100, 211, 231. 40
Total.....	148, 225, 695. 18	127, 996, 450	50, 107, 815	138, 758, 561	465, 088, 521. 18
Limit.....					\$500, 000, 000. 00
Total obligated as of July 8, 1941 ²					465, 088, 521. 18
Balance.....					34, 911, 478. 82
Prospective immediate commitments:					
Increase in shipyards.....					6, 091, 246. 82
Additional facilities for subcontractors.....					2, 473, 832. 00
Machine tools and facilities.....					6, 704, 400. 00
Forging facilities.....					6, 360, 000. 00
Navy yards.....					13, 282, 000. 00
					34, 911, 478. 82
Balance.....					None

¹ Funds for these items for the navy yards are administered by the Bureau of Yards and Docks.

² Total obligated includes project orders, contracts, letters of intent and letter of intent not yet issued. Full contract price of defense plant corporation contracts is included.

The following table appears herewith in connection with the testimony of Admiral S. M. Robinson, *supra*, p. 1438.

TABLE III.—*Expansion of personnel in navy yards and private shipyards*

The following table compares the expansion of personnel in navy yards and private yards since June, 1940¹:

	June 1940	December 1940	May 1941 ¹
Navy yard personnel.....	86,755	127,016	148,819
Percentage increase since June 1940.....		47.5	71.5
Private yard personnel.....	88,600	120,200	167,100
Percentage increase since June 1940.....		35.6	88.7

¹ May 1941 is the latest month for which complete figures are available.

The following statement appears at this point in connection with the testimony of Admiral S. M. Robinson, *supra*, p. 1443.

TABLE IV

In connection with the relaxation of age restrictions on workers in navy yards, the following statement has been furnished by the Civil Service Commission:

"Under existing practice, age limits are determined in accordance with section 4 of civil service rule V, which provides in part that: 'The Commission may, with the approval of the proper appointing officer, change by regulation the existing age limits for entrance to the examinations under these rules, * * *.' Under these provisions it is evident that the determination of age limits for positions in the Navy Department is shared jointly by the Navy Department and the Civil Service Commission.

"Under normal conditions, age limits have been established in accordance with the policy of the Retirement Act of 1920. This statute specifies retirement ages for three groups of positions respectively at 70, 65, and 62 years. It further provides that in order to be eligible for retirement at such ages, the employee concerned must have had at least 15 years of Government service. It is apparent that, in establishing the retirement ages mentioned for the several groups of positions, the statute expresses a policy as to the maximum age at which employees in such groups should be retained in the service. Such retirement ages, coupled with the requirement of 15 years of service for eligibility for retirement benefits, clearly contemplate that, except in unusual circumstances, only those persons who are able to serve 15 years prior to reaching the retirement age should be admitted into the service.

"In order to meet the emergency employment needs created by the national-defense program, the Commission and the Navy Department have, in a large number of recent instances, concurred in advancing the maximum age limit beyond the normal point. In these cases, the considerations previously mentioned are believed to be outweighed by the pressing demands of the defense program. For example, the policy has been to extend maximum age limits for any of the skilled trades and occupations in which shortages exist, and in which an extension of age limitations would possibly make available a reserve of skilled workers between the maximum age limits normally prescribed and the retirement age. Shipfitters, loftsmen, coppersmiths, machinists, toolmakers, and instrument makers are among the large number of positions in the artisan class, for which the maximum age has been extended to 62 years, the retirement age for mechanics in the naval establishments. Coincidentally with the extension of the age limitations, modifications have been effected in the physical standards formerly required, in recognition of the definite relation between advancing age and the appearance of physical impairments. It was realized that in a very large proportion of the cases affected by raising age limits, the services of many persons would be lost to the service if there was not a corresponding adjustment in physical standards. These adjustments make it practically possible for any qualified mechanic, who can function as a mechanic

¹ The personnel figures for both navy yards and private yards were supplied by the Bureau of Labor Statistics.

with safety to himself and without being an employee compensation hazard or a menace to fellow workers, to be employed where needed.

"The extension of the maximum-age limitations has not been confined to the artisan class of workers. Among the professional and subprofessional positions for which advanced age limits have recently been established may be mentioned the following: Assistant to principal naval architect and marine engineer, 70 years; inspector of engineering materials, and inspector of ship construction, 65 years; marine surveyor, radiosonde technician, and professional engineer positions of various grades and options, 60 years."

The following table appears at this point in connection with the testimony of Admiral S. M. Robinson, *supra*, p. 1462.

TABLE V

Private Shipyards by States; East Coast, Gulf, and Great Lakes Areas, July 22, 1941

MAINE

Bristol Yacht Building Co.,¹ South Bristol, Maine; First Naval District.
H. G. Marr,¹ Damariscotta, Maine; First Naval District.
Bath Iron Works Corporation,¹ Bath, Maine; First Naval District.
Snow Shipyards,^{1,2} Rockland, Maine; First Naval District.
Hodgdon Bros. & Goudy & Stevens,¹ East Boothbay, Maine; First Naval District.
Rice Bros. Corporation,¹ East Boothbay, Maine; First Naval District.
Southwest Boat Corporation,¹ Southwest Harbor, Maine; First Naval District.
Maine Shipyards Corporation,^{2,3} South Portland, Maine; First Naval District.
Frank L. Sample, Jr., Inc.,¹ Boothbay Harbor, Maine; First Naval District.
Camden Shipbuilding & Marine Railway Co.,¹ Camden, Maine; First Naval District.

MASSACHUSETTS

Pierce & Kilburn Corporation,² New Bedford, Mass.; First Naval District.
Palmer Scott & Co., Inc.,¹ New Bedford, Mass.; First Naval District.
Geo. Lawley & Sons,^{1,2} Neponset, Mass.; First Naval District.
General Ship & Engine Works,² East Boston, Mass.; First Naval District.
Simms Bros.,¹ Dorchester, Mass.; First Naval District.
Bethlehem Steel Co., Atlantic Yard,² Boston, Mass.; First Naval District.
Bethlehem Steel Co., Shipbuilding Division,¹ Fore River Plant, Quincy, Mass.; First Naval District.
D. N. Kelly & Son, Inc.,² Fairhaven, Mass.; First Naval District.
Quincy Adams Yacht Yard, Inc.,¹ Quincy, Mass.; First Naval District.
Quincy Dry Dock & Yacht Corporation,² Quincy, Mass.; First Naval District.
W. A. Robinson, Inc.,¹ Ipswich, Mass.; First Naval District.

RHODE ISLAND

Warren Boat Yard, Inc.,¹ Warren, R. I.; First Naval District.
Perkins & Vaughan, Inc.,² Wickford, R. I.; First Naval District.
Herreshoff Manufacturing Co.,¹ Bristol, R. I.; First Naval District.
Newport Shipyard, Inc.,² Newport, R. I.; First Naval District.

CONNECTICUT

Electric Boat Co.,¹ Groton, Conn.; Third Naval District.
Mystic Shipyard,¹ West Mystic, Conn.; Third Naval District.
Thames Shipyard, Inc.,² New London, Conn.; Third Naval District.
Noank Shipbuilding Co.,¹ Noank, Conn.; Third Naval District.
Luders Marine Construction Co.,¹ Stamford, Conn.; Third Naval District.

¹ Contract for new construction.

² Contract for repair and alteration of naval vessels.

³ Lease-lend contract for new construction.

NEW YORK

Niagara Shipbuilding Corporation,¹ Buffalo, N. Y.; Third Naval District.
 Hutchinson Boat Works, Inc.,¹ Alexandria Bay, N. Y.; Third Naval District.
 Jakobson Shipyard, Inc.,¹ Oyster Bay, Long Island, N. Y., Third Naval District.
 Freeport Point Shipyard, Inc.,¹ Freeport, Long Island, N. Y.; Third Naval District.
 Greenport Basin & Construction Co.,^{1 2} Greenport, Long Island, N. Y.; Third Naval District.
 Fyfe's Shipyard, Inc.,² Glenwood Landing, Long Island, N. Y.; Third Naval District.
 Wheeler Shipyard,¹ Brooklyn, N. Y.; Third Naval District.
 Ira S. Bushey & Son,¹ Brooklyn, N. Y.; Third Naval District.
 Atlantic Basin Iron Works,² Brooklyn, N. Y.; Third Naval District.
 Sullivan Drydock & Repair Co.,^{1 2} Brooklyn, N. Y.; Third Naval District.
 Elscot Boats, Inc.,¹ Brooklyn, N. Y.; Third Naval District.
 Marine Basin Co.,² Brooklyn, N. Y.; Third Naval District.
 J. K. Welding Co., Inc.,¹ Brooklyn, N. Y.; Third Naval District.
 Brewer Dry Dock Co.,² Staten Island, N. Y.; Third Naval District.
 De Kom Shipbuilding Corporation,¹ Mill Basin, Brooklyn, N. Y.; Third Naval District.
 Robins Dry Dock & Repair Co.,² Erie Basin, Brooklyn, N. Y.; Third Naval District.
 Robert Jacob, Inc.,^{1 2} City Island, N. Y.; Third Naval District.
 Henry B. Nevins, Inc.,¹ City Island, N. Y.; Third Naval District.
 George G. Sharpe,² New York, N. Y.; Third Naval District.
 Consolidated Shipbuilding Corporation,^{1 2} New York, N. Y.; Third Naval District.
 Mercantile Engineering & Repair Co.,² Brooklyn, N. Y.; Third Naval District.
 Cox & Stevens, Inc.,² New York, N. Y.; Third Naval District.
 C. Hildebrandt Dry Dock Co.,¹ Kingston, N. Y.; Third Naval District.
 Bethlehem Steel Co.,^{1 2} Staten Island, N. Y.; Third Naval District.

NEW JERSEY

Federal Shipbuilding & Dry Dock Co.,¹ Kearny, N. J.; Third Naval District.
 Electric Boat Co., Elco Works,¹ Bayonne, N. J.; Third Naval District.
 Delaware Bay Shipbuilding Co., Inc.,¹ Leesburg, N. J.; Fourth Naval District.
 John H. Mathis Co.,^{1 2} Camden, N. J.; Fourth Naval District.
 Mathis Yacht Building Co.,¹ Camden, N. J.; Fourth Naval District.
 New York Shipbuilding Corporation,¹ Camden, N. J.; Fourth Naval District.
 Tietjen & Lang Dry Dock Co.,² Hoboken, N. J.; Third Naval District.
 Penn-Jersey Corporation,¹ Camden, N. J.; Fourth Naval District.

PENNSYLVANIA

Dravo Corporation, Neville Island,¹ Pittsburgh, Pa.; Fourth Naval District.
 Cramp Shipbuilding Co.,¹ Philadelphia, Pa.; Fourth Naval District.
 Kensington Shipyard & Dry Dock Corporation,² Philadelphia, Pa.; Fourth Naval District.
 Lancaster Iron Works, Inc.,¹ Lancaster, Pa.; Fourth Naval District.
 Sun Shipbuilding & Dry Dock Co.,² Chester, Pa.; Fourth Naval District.
 Erie Concrete & Steel Supply Co.,¹ Erie, Pa.; Fourth Naval District.

DELAWARE

Vinyard Shipbuilding Co.,¹ Milford, Del.; Fourth Naval District.
 American Car & Foundry Co.,^{1 2} Wilmington, Del.; Fourth Naval District.
 Dravo Corporation,¹ Wilmington, Del.; Fourth Naval District.

¹ Contract for new construction.² Contract for repair and alteration of naval vessels.³ Lease-lend contract for new construction.

MARYLAND

Maryland Dry Dock Co.,² Baltimore, Md.; Fifth Naval District.
Bethlehem Steel Co., Baltimore, Md., Fifth Naval District.
Annapolis Yacht Yard, Inc.,^{1,2} Annapolis, Md., Fifth Naval District.

VIRGINIA

E. C. Rice & Sons,¹ Readville, Va.; Fifth Naval District.
Newport News Shipbuilding & Dry Dock Co.,^{1,2} Newport News, Va.; Fifth Naval District.
Craig Brothers Marine Railway,² Norfolk, Va.; Fifth Naval District.
Norfolk Shipbuilding and Dry Dock Corporation,² Norfolk, Va.; Fifth Naval District.

NORTH CAROLINA

Elizabeth City Shipyard,¹ Elizabeth City, N. C.; Fifth Naval District.
Broadfoot Iron Works, Inc.,² Wilmington, N. C.; Sixth Naval District.
Barbour Boat Works,³ New Bern, N. C.; Sixth Naval District.

SOUTH CAROLINA

Charleston Shipbuilding & Dry Dock Co.,^{1,2} Charleston, S. C.; Sixth Naval District.

GEORGIA

Savannah Machinery & Foundry Co.,¹ Savannah, Ga.; Sixth Naval District.

FLORIDA

Gibbs Gas Engine Co. of Florida,^{1,2} Jacksonville, Fla.; Seventh Naval District.
Merrill Stephens Dry Dock & Repair Co.,² Jacksonville, Fla.; Seventh Naval District.
Donald Roebling,¹ Clearwater, Fla.; Seventh Naval District.
Gingras Boat Works,¹ Cocoa, Fla.; Seventh Naval District.
Miami Shipbuilding Corporation,¹ Miami, Fla.; Seventh Naval District.
Merrill Stephens Dry Dock & Repair Co.,² Miami Fla.; Seventh Naval District.
Tampa Shipbuilding Co., Inc.,^{1,2} Tampa, Fla.; Seventh Naval District.
Warren Fish Co.,¹ Pensacola, Fla.; Eighth Naval District.

ALABAMA

Gulf Shipbuilding Corporation,¹ Chickasaw, Ala.; Eighth Naval District.
Alabama Shipbuilding & Dry Dock Co.,² Mobile, Ala.; Eighth Naval District.
Ingalls Shipbuilding Corporation,¹ Birmingham, Ala.; Eighth Naval District.

LOUISIANA

Higgins Industries, Inc.,¹ New Orleans, La.; Eighth Naval District.
Todd Johnson Dry Docks,² New Orleans, La.; Eighth Naval District.

TEXAS

Consolidated Steel Corporation, Ltd.,¹ Orange, Tex.; Eighth Naval District.
Weaver Shipyards,¹ Orange, Tex.; Eighth Naval District.
Levingston Shipbuilding Co.,^{2,3} Orange, Tex.; Eighth Naval District.
Pennsylvania Shipyards, Inc.,¹ Beaumont, Tex.; Eighth Naval District.
Seabrook Yacht Corporation,¹ Seabrook, Tex.; Eighth Naval District.

¹ Contract for new construction.

² Contract for repair and alteration of naval vessels.

³ Lease-lend contract for new construction.

Platzer Boat Works,¹ Houston, Tex.; Eighth Naval District.
 Westergard Boat Works, Inc.,¹ Rockport, Tex.; Eighth Naval District.
 Todd Galveston Dry Dock, Inc.,² Galveston, Tex.; Eighth Naval District.

WEST VIRGINIA

Marietta Manufacturing Co.,¹ Point Pleasant, W. Va.; Fifth Naval District.

TENNESSEE

Nashville Bridge Co.,¹ Nashville, Tenn.; Eighth Naval District.

INDIANA

Jeffersonville Boat & Machine Co.,¹ Jeffersonville, Ind.; Ninth Naval District.

OHIO

Goodyear Tire & Rubber Co.,¹ Akron, Ohio; Ninth Naval District.
 American Shipbuilding Co.,¹ Cleveland, Ohio; Ninth Naval District.
 Stadium Yacht Basin, Inc.,¹ Cleveland, Ohio; Ninth Naval District.
 Matthews Co.,¹ Port Clinton, Ohio; Ninth Naval District.

MICHIGAN

Fisher Boat Works,¹ Detroit, Mich.; Ninth Naval District.
 American Cruiser Co.,¹ Detroit, Mich.; Ninth Naval District.
 Defoe Boat & Motor Works,¹ Bay City, Mich.; Ninth Naval District.
 Robinson Marine Construction Co.,¹ Benton Harbor, Mich.; Ninth Naval District.
 Dachel-Carter Shipbuilding Corporation,³ Benton Harbor, Mich.; Ninth Naval District.

ILLINOIS

Henry C. Grebe & Co.,¹ Chicago, Ill.; Ninth Naval District.

WISCONSIN

Manitowoc Shipbuilding Co.,¹ Manitowoc, Wis.; Ninth Naval District.
 Burger Boat Co.,¹ Manitowoc, Wis.; Ninth Naval District.
 Peterson Boat Works,¹ Sturgeon Bay, Wis.; Ninth Naval District.
 Leatham Smith Coal & Shipbuilding Co.,¹ Sturgeon Bay, Wis.; Ninth Naval District.
 Lake Superior Shipbuilding Co.,¹ Superior, Wis.; Ninth Naval District.

Private shipbuilders by States, west coast, July 22, 1941

CALIFORNIA

San Diego Marine Construction Co.,^{1,2} San Diego, Calif.; Eleventh Naval District.
 Martinolich Shipbuilding Co.,² San Diego, Calif.; Eleventh Naval District.
 Robbins Marine Engine Works,² San Diego, Calif.; Eleventh Naval District.
 Campbell Machine Co.,² San Diego, Calif.; Eleventh Naval District.
 South Coast Co.,^{1,2} Newport Beach, Calif.; Eleventh Naval District.
 Harbor Boat Building Co.,^{1,2} Terminal Island, Calif.; Eleventh Naval District.
 Al Larson Boat Shop, Inc.,^{1,2} Terminal Island, Calif.; Eleventh Naval District.
 Thomas Machinery Works,² Terminal Island, Calif.; Eleventh Naval District.
 Bethlehem Steel Co.,^{1,2} San Pedro, Calif.; Eleventh Naval District.

¹ Contract for new construction.

² Contract for repair and alteration of naval vessels.

³ Lend-lease contract for new construction.

Consolidated Steel Corporation,¹ Maywood, Calif.; Twelfth Naval District.
 Fellows & Stewart, Inc.,² Wilmington, Calif.; Eleventh Naval District.
 Wilmington Boat Works, Inc.,² Wilmington, Calif.; Eleventh Naval District.
 National Marine & Engineering Co.,² Wilmington, Calif.; Eleventh Naval District.

Craig Shipbuilding Co.,² Long Beach, Calif.; Eleventh Naval District.
 Consolidated Steel Corporation,¹ Long Beach, Calif.; Eleventh Naval District.
 Los Angeles Shipbuilding & Dry Dock Corporation,^{1,2} San Pedro, Calif.; Eleventh Naval District.

Garbutt & Walsh,² San Pedro, Calif.; Eleventh Naval District.
 Pacific Dry Dock & Repair Co.,¹ Oakland, Calif.; Twelfth Naval District.
 Pacific Coast Engineering Co., Inc.,¹ Oakland, Calif.; Twelfth Naval District.
 Western Pipe & Steel Co.,¹ San Francisco, Calif.; Twelfth Naval District.
 Colberg Boat Works & Stephen Bros.,¹ Stockton, Calif.; Twelfth Naval District.
 F. L. Fulton,¹ Antioch, Calif.; Twelfth Naval District.
 General Engineering & Drydock Co.,^{1,2} Alameda, Calif.; Twelfth Naval District.
 Moore Dry Dock Co.,^{1,2} Oakland, Calif.; Twelfth Naval District.
 Anderson & Cristofani,¹ San Francisco, Calif.; Twelfth Naval District.
 United Engineering Co.,¹ San Francisco, Calif.; Twelfth Naval District.
 Bethlehem Steel Co.,^{1,2} San Francisco, Calif.; Twelfth Naval District.
 Basalt Rock Co., Inc.,¹ Napa, Calif.; Twelfth Naval District.

OREGON

Astoria Marine Construction Co.,^{1,2} Astoria, Oreg.; Thirteenth Naval District.
 Kruse & Banks Shipbuilding Co., Inc.,¹ North Bend, Oreg.; Thirteenth Naval District.

Albina Engine & Machinery Works, Inc.,¹ Portland, Oreg.; Thirteenth Naval District.

Commercial Iron Works, Portland, Oreg.; Thirteenth Naval District.
 Willamette Iron & Steel Corporation, Portland, Oreg.;^{1,2} Thirteenth Naval District.

WASHINGTON

Associated Shipbuilders,^{1,2,3} Seattle, Wash.; Thirteenth Naval District.
 Ballard Marine Railway, Inc.,^{2,3} Seattle, Wash.; Thirteenth Naval District.
 Todd Seattle Dry Docks, Inc.,² Seattle, Wash.; Thirteenth Naval District.
 Seattle-Tacoma Shipbuilding Co.,¹ Seattle, Wash.; Thirteenth Naval District.
 Barbee Marine Yards, Inc.,² Seattle, Wash.; Thirteenth Naval District.
 Blanchard Boat Co.,¹ Seattle, Wash.; Thirteenth Naval District.
 Maritime Shipyards, Inc.,² Seattle, Wash.; Thirteenth Naval District.
 Winslow Marine Railway & Shipbuilding Co.,^{1,2} Seattle, Wash.; Thirteenth Naval District.

Olson & Sunde Marine Works,² Seattle, Wash.; Thirteenth Naval District.
 Pacific Car & Foundry Co.,¹ Seattle, Wash.; Thirteenth Naval District.
 Seattle Shipbuilding & Dry Dock Corporation,^{2,3} Seattle, Wash.; Thirteenth Naval District.

Tacoma Boat Building Co.,^{1,2} Tacoma, Wash.; Thirteenth Naval District.
 J. M. Martinac Shipbuilding Corporation,^{1,2} Tacoma, Wash.; Thirteenth Naval District.

Western Boat Building Co.,^{1,2} Tacoma, Wash.; Thirteenth Naval District.
 Nelson Boiler & Tank Co., Inc.,¹ Tacoma, Wash.; Thirteenth Naval District.
 Lake Washington Shipyards,¹ Houghton, Wash.;² Thirteenth Naval District.
 Bellingham Marine Railway & Boat Building Co.,³ Bellingham, Wash.; Thirteenth Naval District.

¹ Contract for new construction.

² Contract for repair and alteration of naval vessels.

³ Lend-lease contract for new construction.

The following data on the cost of naval accounting is included herewith in connection with the testimony of Admiral Robinson, *supra* p. 1432:

NAVY DEPARTMENT, BUREAU OF SHIPS,
Washington, D. C., July 21, 1941.

MEMORANDUM

From: Bureau of Ships.

To: Bureau of Supplies and Accounts.

Subject: Data required in response to an inquiry by the Senate National Defense Investigating Committee.

1. The Chief of the Bureau of Ships, testifying before the Senate National Defense Investigating Committee on July 9, 1941, was requested by the chief counsel of the committee to secure from the appropriate source data concerning the cost of the Navy Department's accounting system in order that the matter might be incorporated in the records of the committee hearings.

2. In order to comply with the request, the following questions have been prepared and are herewith submitted to the Bureau of Supplies and Accounts for appropriate action:

(1) What is the total annual cost of labor (including pay of officers and enlisted men), and material, for the years 1940 (actual cost), 1941 (partly actual cost, partly estimated cost), and 1942 (estimated cost), of the following:

(a) The Accounting Division in the Bureau of Supplies and Accounts;

(b) The accounting departments in the continental navy yards;

(c) All other accounting departments, or activities ashore, including the Compensation Board and cost inspection activities.

3. It will be appreciated, if, upon completion, the response to this inquiry is forwarded to the Bureau of Ships in order that it may be incorporated in the record of the proceedings of July 9, 1941.

NAVY DEPARTMENT,

BUREAU OF SHIPS,

Washington, D. C., September 22, 1941.

MEMORANDUM

From: Bureau of Ships.

To: Central Clearing Office.

Subject: Navy accounting cost data requested by the Senate National Defense Investigating Committee.

1. In the course of his testimony before the Senate National Defense Investigating Committee on July 9, 1941, the Chief of the Bureau of Ships was requested to furnish the committee with data concerning the cost of the Navy Department's accounting system. In compliance with this request, the Bureau of Ships formulated a series of inquiries which were forwarded to the Bureau of Supplies and Accounts for answer. The preparation of the response has just been completed by the Bureau of Supplies and Accounts and copies thereof have just been forwarded to the Bureau of Ships. Attached hereto is one copy of the response, which may be forwarded to the Senate National Defense Investigating Committee for incorporation in the record of the proceedings of July 9, 1941, if the opportunity of incorporation is still existing.

2. The remaining copy of the attached data is being retained by the Bureau of Ships for photostating. A photostatic copy will be forwarded to the central clearing office for its files as soon as photostatic copies become available.

3. To clarify the attached data, there is also attached a copy of a memorandum dated July 21, 1941, from the Bureau of Ships to the Bureau of Supplies and Accounts, setting forth the inquiries to which the Bureau of Supplies and Accounts has herewith responded.

C. A. JONES,
Captain, United States Navy.

Navy Department accounting costs for fiscal years 1940, 1941, 1942

	June 30, 1940	Year ending June 30, 1941	June 30, 1942
(1) Accounting Division, Bureau of Supplies and Accounts (schedule 1):			
Officers' pay.....	\$11,478.00	\$15,756.00	\$36,150.00
Civilian pay.....	306,650.00	608,220.00	613,560.00
Supplies and services.....	47,525.14	89,827.75	102,632.46
Total (1).....	365,653.14	713,803.75	752,342.46
(2) Accounting departments, navy yards (schedule 2):			
Officers' pay.....	56,061.00	53,680.00	81,263.00
Civilian pay.....	708,331.64	1,033,967.65	2,119,633.68
Supplies and services.....	195,615.38	328,795.13	581,967.37
Total (2).....	960,008.02	1,416,442.78	2,782,864.05
(3) Other accounting activities:			
(a) Compensation Board (schedule 1):			
Officers' pay.....	11,833.00	15,560.00	25,567.00
Civilian pay.....	11,556.00	40,553.00	272,134.00
Supplies and services.....	555.00	8,992.00	12,500.00
Total (a).....	23,944.00	65,105.00	310,201.00
(b) Cost inspection (schedule 1):			
Officers' pay.....	(¹)	110,410.95	220,577.90
Civilian pay.....	(¹)	745,863.03	1,004,142.50
Supplies and services.....	(¹)	76,126.55	87,545.53
Total (b).....	(¹)	932,400.53	1,312,265.93
(c) Other yards and stations (schedule 2):			
Officers' pay.....	11,464.00	11,464.00	18,100.00
Civilian pay.....	359,058.10	496,034.63	1,256,493.45
Supplies and services.....	49,257.26	139,178.91	248,372.69
Total (c).....	419,779.36	646,677.54	1,522,966.14
Total (3).....	443,723.36	1,644,183.07	3,145,433.07
Grand total, (1), (2), and (3).....	1,769,384.52	3,774,429.60	6,680,639.58

¹ In (1) above.

SCHEDULE 1.—Cost of operating Navy cost inspection offices, compensation board, and Accounting Division in Navy Department, for fiscal years 1940, 1941, 1942

	Year ending June 30, 1940			Year ending June 30, 1941			Year ending June 30, 1942		
	Officers' pay	Civilian pay	Supplies and equipment	Officers' pay	Civilian pay	Supplies and equipment	Officers' pay ¹	Civilian pay ²	Supplies and equipment ²
Cost inspection:									
First Naval District.....				\$10,222.79	\$53,540.99	\$2,034.55	\$20,445.58	\$61,572.14	\$2,339.73
Third Naval District.....				16,288.09	190,781.74	28,053.98	22,576.18	218,824.00	32,262.08
Fourth Naval District.....				12,972.39	97,137.06	12,175.53	25,944.78	111,707.62	14,001.86
Fifth Naval District.....				4,340.76	65,634.85	2,656.45	8,681.52	75,365.08	3,054.92
Sixth and Seventh Naval District.....				5,275.00	12,237.17	1,781.80	10,550.00	14,072.75	2,019.07
Eighth Naval District.....				8,189.33	40,118.15	3,230.20	16,378.66	46,135.87	3,714.73
Ninth Naval District.....				11,805.42	52,408.24	10,878.56	23,610.84	60,269.48	12,510.34
Eleventh Naval District.....				12,193.40	65,826.32	7,095.72	24,386.80	75,700.27	8,160.08
Twelfth Naval District.....				13,007.39	56,777.84	6,364.83	26,014.78	65,294.52	7,318.55
Thirteenth Naval District.....				16,116.38	112,000.67	1,854.93	32,232.76	128,800.77	2,133.17
Washington.....							9,756.00	146,400.00	
Total.....	\$11,833.00	\$11,556.00	\$555.00	110,410.95	745,863.03	76,126.55	220,577.90	1,004,142.50	87,545.53
Compensation board.....				15,590.00	40,553.00	8,992.00	25,557.00	272,134.00	12,500.00
Accounting Division ³	11,478.00	306,650.00	47,525.14	15,756.00	608,220.00	89,827.75	36,150.00	613,500.00	102,632.46

¹ Estimated at 200 percent of 1941 figures.

² Estimated at 115 percent of 1941 figures.

³ Includes cost inspection in 1940 and 1941.

SCHEDULE 2.—Cost of operating the accounting departments in the continental navy yards, and all other accounting departments or activities ashore for the years 1940, 1941, Apr. 1–Mar. 31, and the estimated cost for 1942

Yard or station	1940				1941				1942			
	Pay of officers	Pay of civil employees	Cost of supplies and services	Pay of officers	Pay of civil employees	Cost of supplies and services	Pay of officers	Pay of civil employees	Cost of supplies and services	Pay of officers	Pay of civil employees	Cost of supplies and services
Navy Yard, Portsmouth, N. H.	\$6,438.00	\$47,101.83	\$19,607.78	\$4,557.00	\$65,685.35	\$33,632.96	\$7,875.00	\$134,654.97	\$58,408.34			
Navy Yard, Boston, Mass.	6,438.00	58,982.62	783.83	6,438.00	105,876.95	15,384.79	9,756.00	217,047.75	27,281.08			
Navy Yard, New York, N. Y.	6,438.00	91,090.74	29,014.07	6,438.00	141,990.89	48,180.69	9,756.00	291,081.82	85,279.82			
Navy Yard, Philadelphia, Pa.	6,438.00	91,692.00	27,635.00	6,438.00	152,021.07	52,975.00	9,756.00	311,643.19	93,705.75			
Naval Aircraft Factory, Philadelphia, Pa.		35,004.32	9,322.56		41,441.42	12,410.42		84,954.91	21,986.44			
Navy Yard, Norfolk, Portsmouth, Va.	6,438.00	100,159.27	30,293.46	6,438.00	135,413.05	43,875.15	8,157.00	277,391.75	41,127.65			
Navy Yard, Washington, D. C.	6,438.00	97,133.09	28,757.46	6,438.00	115,986.40	23,295.96	9,756.00	237,772.12	77,659.05			
Navy Yard, Charleston, S. C.	4,557.00	50,902.17	15,261.15	4,557.00	71,287.41	28,063.56	7,195.00	146,139.19	49,672.50			
Navy Yard, Mare Island, Calif.	6,438.00	72,191.00	23,068.00	6,188.00	118,203.19	44,680.46	9,506.00	242,316.54	79,084.41			
Navy Yard, Puget Sound, Bremerton, Wash.	6,438.00	66,074.60	11,871.07	6,188.00	86,161.92	26,956.12	9,506.00	176,631.94	47,712.33			
Total, Industrial yards	56,061.00	708,331.64	195,615.38	53,680.00	1,033,967.65	328,795.13	81,293.00	2,110,633.68	581,967.37			
OTHER YARDS AND STATIONS												
Naval torpedo station, Newport, R. I.		56,708.30	11,256.86		65,091.58	28,372.84		133,437.74	50,219.93			
Naval training station, Newport, R. I.		10,165.80	725.07		12,215.01	513.66		25,040.77	909.18			
Naval ordnance plant, Baldwin, Long Island, N. Y.		4,500.00	403.49		4,590.00	144.00		9,409.50	254.88			
Submarine base, New London, Conn.		(1)	(1)		(1)	(1)		(1)	(1)			
Naval clothing depot, Brooklyn, N. Y.		12,084.33	972.59		14,359.14	2,272.00		29,436.24	4,021.44			
Naval air station, Cape May, N. J.		4,237.00	0		315.00	1,092.00		29,645.75	0			
Naval air station, Lakehurst, N. J.		2,758.00	100.00		4,694.00	300.00		9,622.70	1,932.84			
Naval ammunition depot, Fort Mifflin, Philadelphia, Pa.		21,122.40	276.74		4,821.00	34,933.50		9,883.05	531.00			
Naval operating base, Norfolk, Va.		(1)	(1)		(1)	(1)		(1)	(1)			
Naval air station, Norfolk, Va.		12,392.49	453.45		18,399.92	1,111.49		37,719.84	1,967.34			
Naval ammunition depot, St. Juliens Creek, Portsmouth, Va.		0	0		0	0		0	0			
Naval mine depot, Yorktown, Va.		0	0		0	0		0	0			
Naval air station, Jacksonville, Fla.		7,069.10	7,069.10		7,069.10	9,911.27		14,491.66	17,542.95			
Naval station, Key West, Fla.		8,488.42	8,488.42		8,488.42	2,682.00		17,401.20	4,747.14			
Naval air station, Pensacola, Fla.		24,097.00	3,422.00		28,078.04	57,559.98		57,559.98	3,740.01			
Training station, Ninth Naval District, Great Lakes, Ill.		8,765.00	180.00		13,827.00	2,113.00		28,345.35	3,740.01			
Eleventh Naval District, naval operating base, San Diego, Calif.		8,475.00	771.00		18,370.61	1,394.40		37,659.75	2,468.09			
Naval air station, San Diego, Calif.		33,701.00	3,347.00		39,236.00	5,785.00		80,433.80	10,239.45			
Naval air station, San Pedro, Terminal Island, Calif.		1,230.00	(1)		4,261.50	(1)		8,736.08	(1)			
Destroyers stores office, naval operating base, San Diego, Calif.		7,540.00	773.80		7,523.34	808.26		15,422.85	1,430.62			
Naval air station, Alameda, Calif.					10,036.00	9,912.00		20,573.80	17,544.24			

Twelfth Naval District, San Francisco, Calif	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Naval ammunition depot, Hawthorne, Nev	4,280.00	178.00	3,370.00	60.00	3,760.00	6,908.50	106.20	666.76	0
Thirteenth Naval District, Seattle, Wash	1,612.50	84.50	3,240.00	0	3,240.00	6,412.00	3,205.18	8,109.80	3,088.65
Naval torpedo station, Keyport, Wash	1,787.50	9,709.00	3,956.00	1,745.00	16,243.64	132,511.02	28,751.24	444.71	571.82
Naval air station, Seattle, Wash	45,283.00	2,144.36	64,639.52	323.06	2,395.00	10,871.15	4,239.15	1,983.46	687.70
Naval yard, Pearl Harbor, U. S. A.	2,779.50	43.00	5,303.00	2,395.00	1,120.60	12,002.75	86,929.86	5,146.00	138.47
Fifteenth Naval District, Balboa, C. Z.	3,830.00	6,006.98	4,405.90	3,395.00	3,395.00	12,002.75	1,983.46	687.70	138.47
Submarine base, Coco Solo, C. Z.	5,330.00	881.44	42,404.81	1,120.60	3,395.00	12,002.75	1,983.46	687.70	138.47
Naval yard, Cavite, P. I.	41,198.57	433.10	2,520.00	3,395.00	3,395.00	12,002.75	1,983.46	687.70	138.47
Naval ammunition depot, Cavite, P. I.	2,520.00	433.10	2,520.00	3,395.00	3,395.00	12,002.75	1,983.46	687.70	138.47
Naval air station, Coco Solo, C. Z.	1,757.37	84.03	2,400.00	78.23	3,395.00	12,002.75	1,983.46	687.70	138.47
Naval station, Olongapo, P. I.	2,400.00	2,379.00	6,078.62	4,774.64	4,774.64	12,002.75	1,983.46	687.70	138.47
Naval air station, Anacostia, D. C.	4,561.00	219.16	8,419.35	715.42	1,169.44	13,361.90	431.95	2,176.52	8,075.84
Naval research laboratory, Anacostia, D. C.	7,842.74	855.24	14,272.80	6,518.00	950.00	25,890.43	431.95	2,176.52	8,075.84
Naval powder factory, Indian Head, Md	10,900.84	1,178.00	12,629.48	244.04	1,229.07	37,758.88	431.95	2,176.52	8,075.84
Naval proving ground, Dahlgren, Va	3,900.00	0	8,637.07	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval ordnance plant, South Charleston	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval station, Guam	8,399.76	1,820.16	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval station, Tutuila, Samoa	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Sika, Alaska	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Fleet air facility, San Clemente, Calif	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Marine air base, Quantico, Va	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Miami, Fla	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, San Juan, P. R.	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Tongue Point, Oreg	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Quonset Point, R. I.	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Air facilities, Banana River, Fla	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Corpus Christi, Tex	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Eureka, Calif	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval reserve aviation base, Squantum, Mass	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, New York, N. Y.	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Naval air station, Kodiak, Alaska	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Aviation annex, naval supply depot, Norfolk, Va	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Aviation annex, naval supply depot, Oakland, Calif	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Flight test center (location yet to be determined)	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Submarine base, Charlotte Amalie, V. I.	1,800.00	400.29	1,833.60	4,562.62	1,833.60	39,426.00	250.00	500.00	500.00
Total, other yards and stations	11,464.00	49,257.26	496,034.63	139,178.91	139,178.91	1,256,493.45	248,372.60	880,340.06	880,340.06
Grand total	67,525.00	244,872.64	1,530,002.28	467,974.04	467,974.04	3,376,127.13	880,340.06	880,340.06	880,340.06

1 Included with supplies.

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